Advisory Council on Occupational Health and Occupational Safety

Eleventh Annual Report
April 1, 1988 to March 31, 1989

Mandate and Objectives

The function of the Advisory Council is and it has power to*:

a) make recommendations to the Minister of Labour relating to programs of the ministry in occupational health and occupational safety; and
b) advise the minister on matters relating to occupational health and occupational safety which may be brought to its attention or be referred to it.

To achieve this Council has set the following objectives:

Primary Objective

To advise the Minister of Labour on all matters relative to occupational health and safety in Ontario.

Secondary Objectives

1. To ensure as far as is possible that the policies and programs in occupational health and safety effectively minimize the risks to health and safety in all workplaces in Ontario.
2. To ensure as far as is possible that knowledge about occupational health and safety is available to management, labour and the public and that it is understood by them.
3. To assist in promoting and establishing mechanisms involving management and labour to solve problems in occupational health and safety.
4. To ensure as far as is possible that there is appropriate manpower training and development for the occupational health and safety field.
5. To review periodically the effectiveness of the policies and programs implemented to achieve secondary objectives 1 to 4.**

---

* The Occupational Health and Safety Act. s. 10(7).
** added June, 1980

Advisory Council on Occupational Health and Occupational Safety

Eleventh Annual Report April 1, 1988 to March 31, 1989

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Toronto, Ontario
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Ontario

Advisory Council on Occupational Health & Occupational Safety

Conseil consultatif sur la santé et la sécurité au travail

Office of the Chairman

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June 1, 1989

The Honourable Gregory Sorbara
Minister of Labour
400 University Avenue
14th Floor
Toronto, Ontario
M7A 1T7

Dear Mr. Sorbara:

I have the honour to submit the Eleventh Annual Report of the Advisory Council on Occupational Health and Occupational Safety for the fiscal year 1988-1989.

Respectfully,

D.R. McCalla
Chairman

Attachment

Advisory Council on Occupational Health and Occupational Safety
Members and Officers 1988–89

J.I. Barling* (1990) **
Queen's University
Kingston

R.T. Boldt (1988)
Dow Chemical Canada, Inc.
(retired)
Sarnia

G. Botic* (1990) **
CAW - Canada
Willowdale

T. Byrne (1990) ***
Provincial Building & Const.
Trades Council of Ontario
Etobicoke

A.G. Cecutti (1991) ****
Falconbridge Ltd.
Falconbridge

J.H. Couse† (1991) ††
Maple Leaf Mills Ltd.
(retired)
Thornbury

D.N. Dewees (1989)
University of Toronto
Toronto

J.C. Divitt (1989) †††
Canadian Union of Public Employees
Scarborough

R. Falconer (1990) ***
United Steelworkers of America
Toronto

T.M. Fraser* (1990) **
University of Waterloo
(retired)
Niagara-on-the-Lake

J. Gill (1988)
CAW - Canada
North York

D.R. McCalla (1989) ††††
(Chairman)
McMaster University
Hamilton

W.K.C. Morgan‡ (1989)
University of Western Ontario
London

D.G. Morrison (1989) ***
Stelco Inc.
Hamilton

H.D. Moyer (1989) ‡‡
General Motors of Canada
(retired)
Oshawa

G.M. Nipshagen (1988) ***
Acton

S. O'Flynn‡‡‡ (1989) †††
Ontario Federation of Labour
Don Mills

D. B. Smith (1990)
Ellis-Don Ltd.
London

C.J. Tuohy (1989)
(Vice-Chairman)
University of Toronto
Toronto

D. Ublansky (1990)
Energy & Chemical Workers Union
London

J.L. West (1990) **
University of Windsor
Windsor

V. Biggar
Executive Co-ordinator

P.L. Chan
Research Officer

J. Eakin (Part-time)
Research Officer

P. Lewycky (Part-time,
May - Sept 1988)
Research Officer

S. Spencer
Research Officer

N.R. Subramanian
Administrative Assistant

Members' terms expire(d) on October 31 of the year indicated in parentheses except where indicated.

* Appointed December 1, 1988
** November 30
*** December 10
**** March 24
† Appointed February 1, 1989
†† January 31
††† November 1
†††† July 31
‡ Resigned effective October 31, 1988
‡‡ December 9
‡‡‡ Resigned effective January 1988

Preface

The introductory section of last year's annual report reflected on the evolving occupational health and safety scene and the challenge of finding a workable balance among divergent views and interests. It emphasized the importance of arrangements for occupational health and safety evolving to meet changing situations and needs and of looking at the Ontario occupational health and safety system as a whole to ensure that attention and resources are applied where they will be most effective in providing real protection to workers.

The Introduction to this, council's 11th, annual report comments further on change and current proposed modifications to the *Occupational Health and Safety Act*. It stresses the importance of the will of government and workplace parties and of the backing of an informed and concerned public for the achievement of the necessary progress in occupational health and safety.

In 1988/89 considerable council time and attention was devoted to the subject of amendments to the occupational health and safety legislation. Council's activity in this area was characterized by round table council discussions and dialogue with the minister and ministry officials.

Following a special meeting of council, held in May 1988, council submitted advice to the minister concerning amendments to the *Occupational Health and Safety Act* (Advisory Memoranda 88–I). Ensuing council round table discussions on occupational health and safety arrangements focused, most recently, on the proposed amendments to the Act (Bill 208) introduced in the legislature in January 1989. Council intends to submit further advice to the minister concerning amendments early in the 1989/90 fiscal year.

Following receipt of the minister's response to council's previous Advisory Memorandum 87–I on biotechnology, council met with ministry officials for follow–up discussion and clarification. From this discussion, it is council's understanding that a 'green paper' on biotechnology is under development. Council is looking forward to the opportunity of reviewing the paper when it is available.

Council's advisory memorandum on amendments, together with the minister's letter of acknowledgement, as well as the minister's responses to council's advice on biotechnology and its previous Advisory Memorandum 87–VI: *Concerning Mandatory Medical Surveillance*, are included in this annual report.

Council task forces continued consideration of the important, complex and, often, overlapping issues of occupational health and safety education

and training and small business. To further its knowledge and broaden its understanding of the issues, the Task Force on Small Business undertook to meet with individuals from a number of outside organizations and is grateful to those involved for their participation.

In addition to those who met with council task forces during the year, including ministry officials, council invited a number of individuals to address and discuss various topics with council. Among those who met with council were the minister, deputy minister, assistant deputy minister of the Occupational Health and Safety Division, senior policy advisor, Occupational and Environmental Health and Safety and the vice president of Policy and Specialized Services Division of the Workers' Compensation Board.

In the summer of 1988 the Standing Committee on Government Agencies undertook a review of the advisory council and, in August, held hearings and met with the chairman and members of council staff. Discussion with the committee covered a wide range of issues, and council expresses appreciation to the committee and looks forward to consideration of the committee's report and recommendations.

The last section of this annual report contains administrative matters, including council's mandate under section 10 of the *Occupational Health and Safety Act* and details of terms of reference, meetings and membership of council and its task forces.

Appendices at the end of the report contain a variety of statistics, including compensated disabling injuries and fatalities, days lost for temporary total disability by nature of injury, industry and occupation, and disabling injury claims by detailed Standard Industrial Classification. Council is grateful to the Workers' Compensation Board of Ontario for providing these statistics this year.

As always, council remains indebted to the non–council members of council's task forces, who where appointed to particular committees to contribute their expertise, for their valuable assistance. Council also expresses its gratitude for the help and co–operation it has received from members of labour and management and from private and public associations and agencies, including educational institutions.

Mr. Robert Boldt, Mr. James Gill and Mr. Gerry Nipshagen left council on the expiry of their terms, having served for six years, eight years and three years respectively. Dr. Keith Morgan resigned from council after five years and Mr. Sean O'Flynn resigned after two years. Council is indebted to them for their invaluable contributions, commitment and years of service and wishes them well in the future.

Four new members joined council in the 1988/89 fiscal year. Council welcomes the appointment of Dr. Julian Barling, Mr. George Botic, Mr. James Couse and Dr. Morris Fraser.

INTRODUCTION

Occupational Health and Safety: A Time Of Change

'There is a certain relief in change, even though it be from bad to worse; as I have found travelling in a stage coach, that it is often a comfort to shift one's position and be bruised in a new place.'

Washington Irving, Preface to *Tales of a Traveller*

This year marks the 10th anniversary of the *Occupational Health and Safety Act*, which was enacted with much fanfare in 1979. Although there seems to have been a reduction in the mortality due to occupational accidents over the intervening period, there has also been an increase in compensated lost-time accidents and a growing awareness of occupational disease. The proposed modifications to the *Occupational Health and Safety Act* (Bill 208) introduced in the Ontario legislature in January 1989 are a response to the need to improve current arrangements for occupational health and safety. Included in the changes proposed in the new Act is the establishment of a Workplace Health and Safety Agency which will, among other things, take on responsibility for the safety associations (except, at this time, the Farm Safety Association) and the Workers' Health and Safety Centre. If the associations are to continue to receive funds (from those levied by the Workers' Compensation Board) through the agency after 1990, they must alter their boards to include equal numbers of labour and management representatives.

Further, it is proposed that the balance between the powers of the workplace parties be altered by allowing certified members of joint health and safety committees (workers as well as management) to direct an employer to stop work if the Act has been violated and if, in their judgement, it is not safe to proceed.

This council is on record as urging reforms concerning many of these issues (see, for example Advisory Memorandum 88-I: Concerning Amendments to the Occupational Health and Safety Act, which starts on page 12 of this volume), and has repeatedly emphasized the need for a comprehensive and balanced system. Council has also advocated the need for meaningful consultation among all the affected parties.

The prerequisite for true progress is the extension to all industry of the health and safety arrangements that have been developed by the best performers, coupled with continued improvements by the best performers. Changes in organization *per se* will not bring about the changes needed to meet the needs of changing times. While changes in legislation, regulations, organization and agencies can facilitate the process, success will come only if there is the will on the part of government and workplace parties. This, in turn, will require the backing of an informed and concerned public.

In addition to having to cope with the traditional issues of occupational health and safety, any new arrangements must be capable of dealing with new and controversial issues. For example, there is increasing interest in workplace stress. Factors that contribute to the degree of stress at work include: workload, the individual's place in the organization and the attendant issues of ambiguity and responsibility for people, job security, relationships with bosses and colleagues and the organizational structure and climate. Both physical and organizational sources of stress must be considered as management and labour try to come to terms with the 'electronic sweatshop' and with machine–paced work.

It is becoming more widely recognized that stress is not merely something in the mind resulting from an individual's response to his or her surroundings.

> *'In fact, the symptoms of stress also appear as very real physical problems. In the short term stress can be soul destroying: in the long term there is evidence that it can cause diseases that kill.'*[1]

The fact that there are many other causes of stress, including domestic situations and lifestyle factors, complicates consideration of workplace stress but does not, in any way, negate its relevance.

Despite the fact that most citizens are exposed to occupational risks of greater or lesser seriousness in the course of their employment, it is council's view that there is little general appreciation of the broad importance of occupational health and safety and of the rights and responsibilities of employers and workers. However, the public does appear to be interested in both the environment and health promotion and disease prevention.

The publication of Rachel Carson's *Silent Spring* in 1962 brought the perils of pollution to the TV screens and newspapers of Western nations. This, in turn, has increased public awareness tremendously. Today, most people are aware of the issues raised by toxic chemicals, the greenhouse effect or the hole in the ozone layer. In many respects, children in the elementary grades are more environmentally aware than their parents. Thus, while there remain immense environmental challenges to be overcome, there does seem to be a strong and growing base of support in all sectors of society for the changes that are required.

Similarly, in the field of health, there has been a marked shift away from the conventional notion that continued progress in medical technology will eventually solve most health problems and an increased interest in disease prevention, healthy lifestyles and means of empowering individuals to take more responsibility for their own health and health care. It has also become clear that better arrangements for community–based health care are needed to provide various types and styles of facilities. The reports of three different expert committees to the Ministry of Health have endorsed this approach and the Minister of Health has recently stated that the Premier's Council on Health Strategy is following this path.

This Introduction is not the place for a detailed analysis of why the concern of the general public for workplace health and safety seems to lag behind its concern for the environment and other aspects of health. What is clear is that those who are charged with responsibility for occupational health and safety must work toward ensuring that this area receives the attention that it deserves. We note that, despite his responsibilities for occupational health and safety, the Minister of Labour is not a member of the Premier's Council on Health Strategy and ask what message this is intended to convey?

The proposed new Act, like its predecessor, is primarily designed for large workplaces, and its application will inevitably be much more difficult in small workplaces. Council's survey on joint health and safety committees revealed that non-compliance with the existing Act was higher in small workplaces than in large ones. The new Act will compound this problem by increasing the number of workplaces that will be covered. While, from a theoretical point of view, such an extension of coverage may be attractive, mere passage of laws will not bring about improvements in health and safety, and the challenge of ensuring that the intended benefits actually occur in smaller workplaces will tax the imagination and resources of all concerned. Smaller workplaces, in particular, have a pressing need for access to appropriate educational programs that are designed and scheduled to meet their special needs and that deal with issues of awareness and motivation in addition to technicalities. There is an important opportunity to explore the effectiveness of different delivery strategies, including community-based agencies. The amendments to the Act proposed in January 1989 would result in the abolition of the Advisory Council Council; however, council expects that its task forces on small business and education and training will make some useful suggestions concerning these important subjects prior to proclamation of the new Act.

The problems of small workplaces, including the difficulty of enforcing meaningful controls, bring us full circle to the need for individuals to take responsibility for their own health, including their occupational health, and to have the power to do so. As noted above, the provisions in the proposed Act will, under certain circumstances, allow a certified labour or management member of a joint health and safety committee to order work to be stopped if there has been a violation of the Act and they deem the work to be unsafe. It has become clear that this proposal is controversial; but, whatever one's view regarding the appropriateness of these specific provisions, its intention is clearly to empower workers to take increased responsibility for their health and safety in the workplace. The requirement that committee members charged with this responsibility be trained and certified is an attempt to ensure that decisions are made only by persons having the requisite knowledge. It has been estimated that, initially, some 200,000 individuals will have to be trained to the point where they meet the requirements for certification. This, in itself, will be a daunting task.

Like several parts of the proposed Act, the provisions involving certified members will apply only to establishments having 20 or more employees.

Therefore, other mechanisms will have to be devised to ensure that workers in small establishments are empowered in appropriate ways to look after their own occupational health and safety concerns. The fact that inspections are likely to be infrequent and that most small workplaces are unorganized makes education and training especially important. We are concerned that, in the haste to devise programs to train certified members of joint health and safety committees in larger workplaces, small workplaces may be further disadvantaged.

As noted above, we believe that an essential basis for occupational health and safety is improved community knowledge of and support for occupational health and safety. This, in turn, means that increased public education is needed. Consideration must be given to ways and means of getting the highest returns for the effort expended. We suggest that one important mission of the new agency should be to foster greatly enhanced occupational health and safety education in schools, colleges and universities so that, in future, those who enter the work force do so with a reasonable knowledge of the issues surrounding occupational health and safety and of their rights and responsibilities and with increased recognition of the importance of workplace design in preventing accidents and reducing hazards in the workplace. We are aware that the schools are being asked to embrace an expanding variety of social goals; however, we do not see a concern for occupational health and safety as a new goal but rather as one to be incorporated into health, science and social studies programs starting in the early grades. In the hands of a committed teacher, aware of his or her own and community work environments, examples drawn from occupational health and safety will provide interesting and memorable 'case studies' to which students can easily relate.

The quotation that began this Introduction refers to the pain associated with change. It would be idle to suggest that the changes needed in occupational health and safety can be brought about without pain. To be worth the pain, the changes that flow out of the proposed legislation must bring about significant gains in health and safety for the Ontario work force. It would indeed be unfortunate if, as in the opening quotation, the pain is merely transferred from one spot to another!

Council has repeatedly urged that fundamental change to bring about increased levels of health and safety is badly needed. Reorganization alone is not enough. The opportunity provided by the new legislative initiative must not be lost.

References

1. *Health at Work? A Report on Health Promotion in the Workplace.* By Tony Webb and Richard Schilling. Research Report No. 22, p. 25. Health Education Authority, London, 1988.

COUNCIL'S ADVISORY MEMORANDA

Advisory Council on Occupational Health & Occupational Safety
Ontario

Conseil consultatif de la santé et de la sécurité au travail

Office of the Chairman

Bureau du président

400 University Avenue
Toronto, Ontario
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July 7, 1988

The Honourable Gregory Sorbara
Minister of Labour
400 University Avenue
14th Floor
Toronto, Ontario
M7A 1T7

Dear Mr. Sorbara:

On behalf of the Advisory Council I am pleased to submit Advisory Memorandum 88-I concerning some fundamental principles and suggestions regarding the occupational health and safety legislation and its development in Ontario.

Council recognizes that this is an extremely complex and difficult issue to address and that the comments and recommendations contained in the accompanying document are only some of the issues that need to be considered in a comprehensive review.

Although the document contains recommendations on a number of specific issues, it emphasizes the need for extensive and meaningful consultation and a collaborative approach in the development of the legislation. The recommendations are offered in this context in the hope that they will aid you in this difficult task.

Respectfully,

D.R. McCalla
Chairman

cc: G.R. Thompson
T. Millard

Attachment

Advisory Memorandum 88–I to the Minister of Labour July 7, 1988

Concerning Amendments to the Occupational Health and Safety Act

BACKGROUND

The various proposals concerning amendment of the *Occupational Health and Safety Act* have not only stimulated interest in the specific amendments proposed but have also led to questions concerning the fundamental principles underlying the legislation.

It is generally considered that the basic principles of the Act came out of a consideration of the recommendations of the Ham report,[1] which stressed the importance of the internal responsibility system (IRS) for the protection of health and safety in the workplace. Council considers that any analysis of the system of occupational health and safety in Ontario should commence with two basic questions:

- Is the type of internal responsibility system provided for in the Act the best way or, at least, an effective way to achieve the objective of occupational health and safety?
- Are the provisions in the Act and the way the Act is administered the most effective means of promoting and implementing the IRS?

Proposals embodied in Bill 106[2] to amend the Act suggested that the fundamental principles of the Act were largely accepted by the government at that time and implied that all that was needed to bring about the necessary improvements to the system was modifications in specific details of administration and/or implementation. Advisory Memorandum 86–III[3] set out council's view that there are still many serious fundamental problems in occupational health and safety in Ontario and there are concerns that insufficient progress has been made in the 10 years that the Act has been in force. In the same advisory memorandum council recommended 'that the Minister of Labour take the steps necessary to provide a public forum for all interested parties to debate the premises underlying the Act and its enforcement and to consider alternative structures.' It stressed the need for consultation 'that involves the affected parties in a meaningful role' and 'direct and ongoing dialogue and participation with, and among, the affected parties in the development of the policies, regulations and programs with which they are expected to live.'

Council re–emphasizes the importance of genuine consultation involving face–to–face interaction and collaboration among the parties over a period of time. Solicitation of briefs and comments in response to discussion drafts may, from time to time, be appropriate. However, this process alone cannot be considered to represent full and effective consultation.

Council recently held a one and half-day meeting devoted entirely to reviewing the Act and various proposed amendments, and a number of general and specific issues with respect to the Act were discussed. The first part of this document contains council's advice on some of the general fundamental issues and principles.

The second part of the document contains council's position on some specific issues. These were developed by consensus in council and are set out in the hope that they will contribute to the ongoing consultation process advocated in the first part.

1. GENERAL ISSUES

In its consideration of the fundamental principles underlying the administration of the Act, council noted that the Act appears to have two thrusts, *viz.* self regulation in the form of the internal responsibility system, and legal compulsion through enforcement of government legislation and regulations. While not mutually exclusive, these represent two alternative approaches for determining and auditing conditions and standards of occupational health and safety: one primarily within the workplace, the other more dependent on government.

Internal responsibility, as described in the Ham report, stresses the important role to be played by workers; however, the Act gives workers only limited resources and authority to enable them to participate in the system intended to protect them. Although there is a requirement in the Act for certain workplaces to have joint health and safety committees, internal responsibility is not specifically mentioned in the Act. Further, it is unclear whether the joint health and safety committee is to be internal or external to the responsibility system that was described by Ham for local work processes and whether the joint committees are considered to have direct or contributive responsibility.* If the committees are intended to be a fundamental component of the IRS for the purposes of protecting health and safety in the workplace, it appears inconsistent and inequitable to exempt the majority of workplaces in the province from the requirement to have a committee. If, as indicated by the provisions for committees to inspect and investigate, joint committees are intended to help maintain standards, they need effective means of enforcement. Further, if joint committees are to supplement and/or facilitate the processes of the existing responsibility system, and, if committees are mandated, their rights and responsibilities should also be mandated.

The two thrusts of the legislation also appear to present the government inspectors with the difficulty of choosing between the role of a facilitator of internal responsibility, helping the workplace parties to resolve disputes, and the role of a strict enforcer of legal standards.

---

* The various modes of participation were described by Ham as knowledge, contributive responsibility (providing individual and collective insight, advice and judgement) and direct responsibility (making decisions).

Council considers that if the occupational health and safety system in Ontario is to be improved, it is essential that a determination be made about the relative emphasis to be given to the two approaches (self regulation and legal compulsion). Whatever determination is made, it should be made clear in the Act; and, at the same time, it will be necessary to ensure that the parties have the appropriate tools to make the system work. Suitable education and training and appropriate responsibilities and authority must be included as important among these tools.

Although committees currently consist of representatives of both management and workers, there is no requirement for management to respond to, let alone act on, committee recommendations. Council recognizes that assignment of increased responsibilities to joint health and safety committees would be seen by many employers as a 'loss of power' and is, therefore, controversial. Although council identifies some basic duties that it considers the committee should have, it suggests that the detailed prescription of the powers required to perform these duties be the subject of genuine consultation with management and labour. Council stresses that the workplace parties should, *together*, discuss their experiences and strive toward a consensus on the approach that should be pursued. Through a similar process the parties should be involved in determining the modifications needed to make the Act effective in achieving its objectives.

Therefore, council recommends

ACOHOS RECOMMENDATION 88–1

> that, prior to formulating amendments to the Act, the Minister of Labour, together with the workplace parties, work toward determining a consensus on the overall direction to be pursued and, then, on the specific changes that are required.

There also appears to be a dichotomy in that the Act appears to be attempting to set general standards applicable to all workplaces in Ontario while, at the same time, it includes specific requirements applicable only to certain types of workplaces. The specific requirements appear to cause practical difficulties for some sectors with the result that exemptions and exceptions must be spelled out within the Act.

Council considers that the Act should specify the fundamental principles, duties and responsibilities of the various parties and should apply to *all* workplaces.

It is recognized that, in some cases, the basic requirements will present difficulties and that these difficulties may be common for certain sectors. However, council stresses the importance of having the same basic requirements and standard of protection for all workers enshrined in the legislation. It is council's view that the Act should include the standards, principles and objectives, and be the enabling legislation for specific regulations (i.e. details of how to apply the principles and what is needed

to attain the objectives) that would have to be worked out among the affected parties representing each sector or group that is considered to have specific needs. Such sectors might include: construction, transportation, agriculture and, possibly, groupings such as small business. Council notes that the government has the power to exempt certain specific classes and to specify exceptional circumstances by, or in, regulations.

Council recommends

ACOHOS RECOMMENDATION 88–2

that the Act be simplified, setting out basic rights, responsibilities and duties applicable to *all*, and providing for the Lieutenant–Governor in Council, *following the appropriate consultative process*, to make regulations to deal with specific details for the various sectors.

ACOHOS RECOMMENDATION 88–3

that there should be no all–encompassing exemptions or exceptions from either the application of the Act or any of its major provisions.

Another general issue that council believes is fundamental to the effective administration of the Act and the implementation of any system of health and safety outlined in the Act is education, training and information transfer, especially for workers and supervisors. This issue will be dealt with in more detail later.

2. SPECIFIC ISSUES

As described earlier, the positions set out in this section of the document were reached by consensus and resulted from discussions in council as well as from a consideration of council's previous advice. Detailed rationale for these positions is not included in this document. In some cases, the rationale can be found in previous advisory memoranda.

These positions are put forth as council's recommendations on the basic principles, duties and responsibilities needed in the Act; but council wishes to stress the necessity for these basics to be supplemented by specific regulations developed jointly with the affected parties considering the best means of applying the Act to their specific circumstances.

Universality of the Coverage and the Requirements for Committees

Council recommends

ACOHOS RECOMMENDATION 88–4

that, unless otherwise prescribed, all workplaces in which the number of employees does not exceed 10 be required to have a worker health and safety representative; and

that, unless otherwise prescribed, all workplaces in which the number of employees regularly exceeds 10 be required to have joint health and safety committees with two co-chairpersons: one representing management and one representing workers.

Council notes that, for continuity in cases such as construction, where the number of workers at a workplace could be changing frequently, it is important that the worker health and safety representative be a member of the joint health and safety committee if and when such a committee should be required.

Prevention Programs

ACOHOS RECOMMENDATION 88-5

that there be, in the Act, a requirement for each workplace to have a written prevention program with the objective of preventing occupational injury and illness;

that the fundamental components* of the program be specified in regulation;

that education and training be an essential component of the program;

that the prevention program be developed for each workplace through a process involving the affected parties;

that there be a requirement for the program to be approved by the joint health and safety committee;

that it be the duty of the worker to work in compliance with the program;

that it be the duty of the employer to be in compliance with the program;

that committees have the power to inspect, enforce and ensure compliance with the program;

that there be a provision for appeal to the ministry to resolve

disputes within joint health and safety committees or between committees and management and/or workers; and

that the prevention program include the type and nature of work

and the requirement for written work procedures as well as the physical conditions at the workplace.

---

* Council has, in the past, recommended various components of such workplace programs and discussed the value of a comprehensive approach and the need to integrate health and safety into general workplace processes and procedures. Council discussed these issues in more detail in Advisory Memorandum 85-IV.[4]

Duties of Employers

ACOHOS RECOMMENDATION 88–6

that employers be required to ensure that each workplace has a written prevention program;

that employers be required to provide all workers and supervisors with appropriate education and training, as specified in the prevention program, at the employer's expense;

that employers be required to provide appropriate additional education and training for health and safety representatives and joint committee members, as specified by the prevention program, at the employer's expense; and

that employers be required to be in compliance with the prevention program.

Duties of Committee

ACOHOS RECOMMENDATION 88–7

that committees be required to approve the prevention program and be responsible for inspecting and ensuring that there is compliance with the prevention program.

Regulation–Making Powers of the Lieutenant–Governor in Council

Council stresses the importance of the Lieutenant–Governor in Council, following the appropriate specified collaborative development process, having the power to make regulations as prescribed:

- to exempt certain classes or to specify circumstances or cases as exceptions, as needed. (This may include specific regulations applying to particular sectors);
- to determine the size of committees, as needed;
- to identify basic components of the prevention program.

Section 21

Council's advisory memoranda 78–IV,[5] 83–IV[6] and 87–I[7] all contained recommendations concerning the notification required when new agents are to be introduced into the workplace. Council stresses that the specified information to be provided with the notification should be presented and reviewed in a timely manner to enable the minister to prohibit, control or regulate the introduction of a hazardous substance in the workplace.

ACOHOS RECOMMENDATION 88–8

that the Minister of Labour ensure that the notification in section 21 be required as early as possible, but at least 90 days prior to the intended

date for introduction of a new agent and that the test data requirements are clearly identified; and

that section 21 include explicit provision of power to the minister to delay, prohibit or control the introduction of the new agent if he considers that more data are required or that the agent is likely to pose a hazard to the health of workers.

Dispute Resolution and Appeal System

ACOHOS RECOMMENDATION 88–9

that appeals against either inspectors' or Directors' orders should be heard by a body that is independent of the Ministry of Labour (e.g. the Ontario Labour Relations Board or other such body or organization).

It is a fundamental principle of natural justice that the adjudicator of a dispute or an appeal be independent of either party to the dispute. Council considers that there should be provision for an appeal to the ministry in cases of disputes within the workplace, both for disputes within a joint health and safety committee and where employers or workers consider that they are aggrieved by a decision of the committee. Council considers that such a system would simplify the process, decrease the chance of bias, be more likely to provide a fair, equitable resolution and stimulate the affected parties to resolve the dispute in a manner that is satisfactory to both parties.

Right to Refuse

As noted earlier, council considers that the basic rights and responsibilities enshrined in the Act should apply to all. The right to refuse is a fundamental right that should apply to all workers, as should the qualifications that limit that right.

ACOHOS RECOMMENDATION 88–10

that the Act be simplified so that a worker may refuse any work activity where he or she has reasonable grounds to believe that his or her health or safety or the health or safety of another person is likely to be endangered by that work except in situations where the health or safety of another person or the public is likely to be endangered by the refusal.

3. OTHER ISSUES

Council also wishes to comment on two of the amendments that were proposed in Bill 106.

The Office of Investigation

ACOHOS RECOMMENDATION 88–11

that the proposed 'office of investigation' not be included in the Act.

The main reasons for this position are:

1) council was unaware of an expressed need for such an office;
2) the proposal in the consultation draft did not appear to engender support from either management or labour;
3) it appears to be a duplication of services/systems already in place; and
4) the need for such a service would be affected when there is a more effective mechanism in the workplace for the workers, health and safety representatives and joint health and safety committees to participate in and enforce standards agreed to in a prevention program for the workplace.

Notification of Occupational Illness

ACOHOS RECOMMENDATION 88–12

that notification of occupational illnesses to the committee or health and safety representative be made only with the informed consent of the worker.

This would be consistent with the *Health Disciplines Act*. Council notes that, in practice, notification of occupational illness to joint health and safety committees and the Workers' Compensation Board can lead to some negative consequences, such as:

- the refusal by indemnity insurers to pay when a Workers' Compensation Board claim has been submitted and the refusal of Workers' Compensation Board to pay until a diagnosis has been confirmed; and
- a breach of confidentiality that could lead to many questions if the diagnosis, when completed, indicated that a condition was not work related.

Council also urges the minister to find a mechanism to ensure that workers suspected of having an occupational illness receive appropriate benefits during the period necessary to make the diagnosis and/or decision whether or not the disease is workplace related.

It is recognized that many of the positions discussed in this advisory memorandum will, if implemented, have an enormous impact on Ontario workplaces. There would be many concerns about the practicality, economic impact and enforceability of such provisions being included in the Act and regulations. However, council strongly believes that programs designed for a specific workplace by workers and employers affected by the programs and responsible for the programs' implementation will be as complex or as simple, as practical and as cost efficient as any program that would be effective at protecting health and safety in that workplace. Also, such programs would be accepted by the parties and would be more likely to engender compliance and be enforced internally. However, council stresses that there is an important role for the ministry that

includes ensuring that: the fundamental principles in the Act apply to all workplaces; the rights and responsibilities for the parties are clearly stated in the legislation; minimum standards and essential components of programs are specified in regulations, and that there is strict and uniform enforcement.

References

1. *The Government of Ontario, Report of the Royal Commission on the Health and Safety of Workers in Mines.* (Ham report), James M. Ham, Commissioner, (Toronto: Ministry of the Attorney General, 1976.)
2. *Bill 106, An Act to amend the Occupational Health and Safety Act.* First Reading, June 29th, 1987.
3. Advisory Memorandum 86–III: Concerning Consultation. In: *Advisory Council on Occupational Health and Occupational Safety Ninth Annual Report, April 1, 1986 to March 31, 1987.*
4. Advisory Memorandum 85–IV: Workplace Control Programs. In: *Advisory Council on Occupational Health and Occupational Safety Eighth Annual Report, April 1, 1985 to March 31, 1986.*
5. Advisory Memorandum 78–IV: Policy and principles for the recognition of potential new chemical hazards. In: *Advisory Council on Occupational Health and Occupational Safety First Annual Report, April 1, 1978 to March 31, 1979.*
6. Advisory Memorandum 83–IV: New Chemical and Biological Agents in the Workplace: Identification and Control of Carcinogens and Potential Carcinogens. In: *Advisory Council on Occupational Health and Occupational Safety Sixth Annual Report, April 1, 1986 to March 31, 1987.*
7. Advisory Memorandum 87–I: Biotechnology. In: *Advisory Council on Occupational Health and Occupational Safety Tenth Annual Report, April 1, 1987 to March 31, 1988.*

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December 15, 1988

Dr. D. R. McCalla
Chairman
Advisory Council on Occupational
Health and Occupational Safety
11th Floor, 400 University Avenue
Toronto, Ontario
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Dear Dr. McCalla:

Thank you for your letter of July 7, 1988, submitting Advisory Memorandum 88-1, Concerning Amendments to the Occupational Health and Safety Act. Council's advice is very timely in view of current initiatives of the Ministry respecting a review of Ontario's occupational health and safety legislation.

I fully support Council's view on the need for extensive and continuing consultation with the affected parties on the development of occupational health and safety policies and legislation. I believe that the recent establishment of the Joint Steering Committee on Hazardous Substances in the Workplace, as well as the establishment of two tripartite committees to develop regulations respecting workplace inventories and hazardous physical agents are indicative of the Ministry's commitment to broad consultation.

At present, a major initiative within the Ministry is a review of the Occupational Health and Safety Act and the various options for action which have been proposed since Bill 106 to amend the Act was first introduced by my predecessor, and subsequently died on the Order Paper. This review has proceeded with extensive consultation with industry and labour representatives. It is very helpful to have Council's views on various aspects of the legislation and on Bill 106 as our review is underway. Until this review is completed, I wish to reserve comment on the issues that Council has addressed in its recommendations respecting specific amendments to the Act. At that time, I will be in a better position to discuss the specific amendments proposed in Council's recommendations.

Again, I thank you and Council members for the effort that has gone into preparing the memorandum.

Yours truly,

Gregory Sorbara
Minister

Follow-up Correspondence to Previous Advisory Memorandum 87-I

Ontario Ministry of Labour
Ministère du Travail de l'Ontario

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May 18, 1988

Dr. D. R. McCalla
Chairman
Advisory Council on Occupational Health
and Occupational Safety
400 University Avenue, 11th Floor
Toronto, Ontario
M7A 1T7

Dear Dr. McCalla,

My officials have completed their review of Advisory Memorandum 87-1 on Biotechnology, and I am now prepared to respond to Council's advice.

The recommendations in Council's Memorandum address the development of policy, and the implementation of a strategy for the Ministry of Labour to deal with the potential hazards of biotechnology in the workplace. The Ministry is aware of the need for such action and has already undertaken some initiatives to meet that need. This is a challenging field and I believe that the recommendations in Advisory Memorandum 87-1 will assist the Ministry in its current and future initiatives on biotechnology in the workplace.

The response of staff of the Occupational Health and Safety Division, to the recommendations of Advisory Memorandum 87-1, is as follows.

Recommendation 87-1

> That the Minister of Labour take immediate steps to ensure that an agenda for action on biotechnology be developed for the Ministry of Labour.

Ministry staff agree that an agenda for action on biotechnology is needed, and believe that the Ministry has already taken appropriate action in that regard. Certainly the Ministry's request for Council's advice on biotechnology and worker health and safety, can be considered a first step towards developing a plan of action on biotechnology for the Ministry of Labour. Other steps taken by the Ministry are described in the responses to later recommendations.

In addition, the Deputy Minister's Science Policy Advisor on Occupational and Environmental Health maintains contact with federal and other provincial agencies with programs or a mandate relating to biotechnology, to ensure that we remain aware of their initiatives, and that our policies are developed with the best available information.

Recommendation 87-2

That in the interim, the Minister of Labour ensure that the present legislation and regulations be used and that:

1. the present review procedure for new chemicals and biological agents is adequate and appropriate for agents, products and processes of biotechnology;

2. there is the requirement to notify the government of all agents, products and processes classified as potentially hazardous according to existing guidelines. Such notification should include data submission and the requirement for government approval for work at the various stages of the life cycle of the agents, products or processes;

3. agents, products or processes for the purposes of research or those used in small quantities are not exempt from the notification/data submission/approval step when the agents, products or processes are classified as potential hazards according to existing guidelines.

With respect to Point 1, Ministry staff believe that the present review procedure for new chemical and biological agents is adequate and appropriate for agents, products and processes of biotechnology. A Toxicological Review Committee has been established to review notifications under section 21. This committee is comprised of senior officials of the Health and Safety Support Services Branch, namely, the Branch Director, the Senior Medical Toxicologist, the Chief of the Occupational Health Laboratory and the Chief of the Resource Service. In addition, an official from the Ministry of Health, with expertise relating to biological agents, acts as a consultant to this committee.

In Point 2, Council has recommended a requirement to notify the government of all potentially hazardous agents, products and processes of biotechnology. Ministry staff believe that although section 21 requires the notification of only new agents, the manner in which "new" is interpreted in Ministry

guidelines, ensures that the intent of Council's recommendation will be met.

According to the Ministry's Procedures and Guidelines for section 21, a new chemical or biological agent is defined as an agent or combination of such agents that was neither in use in Ontario prior to October 1, 1979, nor was it listed in the Toxic Substances Control Act Inventory, as of July 1980. Although this definition of "new" excludes biological agents that were in use in Ontario prior to October 1, 1979, at present, the Health and Safety Support Services Branch is not aware of any genetically engineered organisms that would fall into this category.

The notification requirements under section 21 already include requirements for the submission of data with respect to the agent. Although section 21 does not include a requirement for government approval with respect to agents, products or processes of biotechnology, other sections of the Occupational Health and Safety Act, notably, sections 20 and 28, permit orders to be issued where worker health or safety may be endangered, and consequently, can be used to achieve the intent of Council's recommendation.

With respect to Point 3, the Ministry of Labour will consider reviewing the exemption under section 21 for chemical and biological agents that are used, manufactured or imported for the purposes of research and development. It should be pointed out that this exemption does not leave workers in research laboratories unprotected, because the Occupational Health and Safety Act and pursuant regulations apply to such operations.

Recommendation 87-3

> That the Minister of Labour ensure that the mechanism for developing a policy includes the opportunity for public participation and the consideration of input from interested and affected parties.

Ministry staff support Council's recommendation and are committed to ensuring broad consultation with affected and interested parties. It is the Ministry's intention to involve such parties in the development of a policy on biotechnology.

Recommendation 87-4

That, in developing a policy for the Ministry of Labour, the following issues be considered and addressed;

1. the purpose of the policy;

2. the definition and scope of biotechnology and related terms for the purposes of the policy;

3. the need for a classification scheme to determine what should and should not be included in the policy and to categorize, according to potential hazard, the various levels of concern/regulation/control;

4. the need for a review procedure to be used by the Ministry for identifying and assessing the potential for harm;

5. whether the existing legislation should serve as the basis for dealing with biotechnology or whether new legislation should be developed;

6. the need for a mechanism to ensure ongoing communication with:

   (a) scientific experts
   (b) other jurisdictions
   (c) the public;

7. a mechanism to protect confidentiality of information.

Council's points for consideration in relation to policy development are all worthy ones.

In the discussion relating to point 2, Council stressed the need for a clear definition of biotechnology to serve as the basis for the interpretation of legislation. Of concern to Council is the question of whether the Ministry's policy will address the "old" and the "new" biotechnology, or be restricted to "new" agents and operations.

To date, the Ministry has used a definition that encompasses the old and the new biotechnology, to allow for the broadest interpretation of the existing legislation.

Point 3 calls for a scheme to classify the agents, products and processes of biotechnology according to potential hazard. To date, for the purposes of field visits, the Ministry has applied the classification scheme set out in the Guidelines of the Medical Research Council of Canada. Ministry staff agree there is a need to review the appropriateness of this scheme,

and to review other classification schemes referred to in Council's Memorandum.

Point 4 deals with the need for a procedure within the Ministry to review data submitted in respect of agents, products or processes of biotechnology, to determine if government approval should be given.

As indicated in the response to Recommendation 87-2, Ministry staff believe that the existing review procedure is adequate and appropriate for agents, products and processes of biotechnology; and that while there is no formal approval mechanism, the existing occupational health and safety law permits agents to be used with or without controls at the discretion of the Director of the Health and Safety Support Services Branch.

With respect to point 5, the Ministry recognizes the need for a review of existing legislation to determine its applicability to the control of biotechnology. In 1985, the Ministry participated with many other provincial and federal agencies in such a review, that was conducted on a Canada-wide basis, and co-ordinated by Environment Canada.

In the discussion relating to point 5, Council referred specifically to the need to review the exemption of farming operations from the Occupational Health and Safety Act, and the consequent lack of protection for farm workers who may be exposed to agents, products or processes of biotechnology. I would like to point out that the whole issue of how to address occupational health and safety on farms is currently under joint review with the Ministry of Agriculture and Food, and with representatives of the farming community.

Point 6 calls for a mechanism to ensure ongoing communication with affected parties. Ministry staff agree that such communication is vital, especially when dealing with a rapidly developing technology where the potential hazards, and the jurisdictional roles are unclear.

With respect to point 7, section 34 of the Occupational Health and Safety Act already provides for the protection of confidential information. In addition, the Freedom of Information and Protection of Privacy Act, 1987, also provides protection for such information.

Recommendation 87-5

> That the Minister of Labour ensure that there is sufficient expertise in the Ministry, or available to the Ministry as a resource, to support and perform the functions described in ACOHOS Recommendations 87-1 to 4, 6 and 7.

The need for technical expertise to support Ministry policies and practices in relation to biotechnology is recognized. Ministry staff believe that in addition to the medical and toxicological expertise that already exists in-house, there is access to expertise in other provincial and federal agencies, and in the industry itself. As indicated in the responses to recommendations 87-2 and 87-6, the Ministry has already made it a practice to seek outside expert advice where considered necessary.

Recommendation 87-6

> That the Minister of Labour take steps to ensure that inspectors visiting establishments that are undertaking work in biotechnology receive specific training in biotechnology and the associated potential for hazards.

Ministry staff support Council's recommendation, and implementation is already underway. Biotechnology Guidance Notes have been prepared in consultation with a Ministry of Health expert. The document provides an introduction to biotechnology for the consultants of the Health and Safety Support Services Branch who conduct field visits to workplaces where biotechnology is carried out. These Guidance Notes will be updated as necessary to include any new information on the hazards of biotechnology as they become known.

Recommendation 87-7

> That the Minister of Labour take steps to promote, within government, the development of policies to deal with biotechnology, i.e. products, processes and agents through all stages of their life cycle from research and development through use to disposal, and to initiate a mechanism for co-ordinating the policies between provincial ministries and federal departments.

Council's recommendation has already been acted upon. In April 1986, an Interministry Working Group on Biotechnology was established to co-ordinate policy development in the Ontario government. The Group is chaired by the Ministry of Labour and includes representatives of the Ministries of Agriculture and Food, Environment, Health, Natural Resources, and Industry, Trade and Technology.

Consultation among Group members and the appropriate federal departments occurs on an informal but regular basis. At present, the Ministry of Environment has the lead role in co-ordinating policy development with the federal government in respect of the new federal Environmental Protection Act and its reference to biotechnology. Group members also support extensive consultation with other stakeholders, for example,

environmental/public interest groups, industry, organized labour, the agricultural community, etc., in relation to policy development.

In addition to chairing the Interministerial Working Group on Biotechnology, the Ministry of Labour is represented on two other interministerial groups that have recently been formed to deal with quite specific, as opposed to broad policy issues relating to biotechnology. One group is investigating various issues related to biological pest control; and the other is investigating the potential implications for use in Ontario of a particular biological agent.

Once again, my thanks to you and your colleagues for the efforts involved in the preparation of this Advisory Memorandum.

Yours truly,

Gregory Sorbara
Minister

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May 31, 1988

Dr. Dennis McCalla
Chairman
Advisory Council on Occupational
Health and Occupational Safety
11th Floor
400 University Avenue
Toronto, Ontario
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Dear Dr. McCalla:

In response to your letter of March 18, and as previously discussed, I have no objection to release of Memorandum 87.1. You, of course, have my response to the Memorandum and it may be released as well.

Yours truly,

Gregory Sorbara
Minister

Advisory Council on Occupational Health & Occupational Safety
Conseil consultatif de la santé et de la sécurité au travail
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June 27, 1988

Mr. Glenn Thompson
Deputy Minister of Labour
400 University Avenue
14th Floor
Toronto, Ontario
M7A 1T7

Dear Mr. Thompson:

I spoke to Mr. Sorbara last week concerning council's wish to further discuss the response to council's Advisory Memorandum 87-II on biotechnology and council's recommendations. Mr. Sorbara has indicated that he would like to meet with council and will do so in September, however, he will be away and unable to meet with council in July.

Mr. Sorbara has suggested that, if can be arranged, council meet with yourself and Mr. Millard to discuss biotechnology. Council would welcome the opportunity and I invite you to meet with us for this purpose at council's next meeting on Tuesday, July 12.

Council would be interested in hearing further about the policies and the procedures in place for biotechnology and, also, in seeing the Biotechnology Guidance Notes referred to in the Minister's response.

If the timing is suitable for you, we would look forward to having you and Mr. Millard, together with other ministry officials you would like to have join you, meet with us on July 12, beginning with breakfast at 8:15 a.m., in the Harris Room, Hilton Hotel, Richmond Street West. Mr. Sorbara indicated to me that he would like to have someone from his office present and it would be appreciated if you could ensure that that invitation is extended on my behalf.

Yours truly,

D.R. McCalla
Chairman

cc: Hon. Gregory Sorbara
T.M. Millard

Follow-up Correspondence to Previous Advisory Memorandum 87-VI

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June 20, 1988

Dr. D. R. McCalla
Chairman
Advisory Council on Occupational
Health and Occupational Safety
400 University Avenue, 11th Floor
Toronto, Ontario
M7A 1T7

Dear Dr. McCalla:

Thank you for your letter of March 18, 1988 forwarding a copy of Advisory Memorandum 87-VI "Concerning Mandatory Health Surveillance."

Council's advice on this matter is very timely. As you know, the Joint Steering Committee on Hazardous Substances in the Workplace, a bipartite committee comprised of labour and employer groups, has been established to develop and review regulations for toxic substances. In May 1988, a task force was struck by the Committee to review medical surveillance for toxic substances.

The objective of the Task Force on Medical Issues is to evaluate the appropriateness and effectiveness of biomedical surveillance, which includes health surveillance, health screening and biological monitoring, and medical examinations as part of a regulatory program to protect the health and safety of workers and as a means of improving the workplace environment. The Task Force will also make recommendations regarding these issues.

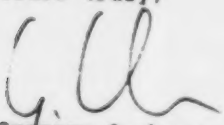
The Assistant Deputy Minister of the Occupational Health and Safety Division, Mr. Tim Millard, is chairing the Task Force.

At the request of the Joint Steering Committee, my officials have prepared a discussion paper entitled "Medical Requirements in Toxic Substance Regulations" which addresses these issues and offers a number of options for consideration. The report has been forwarded to the Task Force for their review and I understand a copy was recently forwarded to Council by Tim Millard.

Advisory Memoranda 83-III, 85-II and 87-V are discussed in the report. My officials have prepared an addendum to the discussion paper incorporating Council's latest advice. A copy of the addendum is attached for Council's information.

Once again I would like to thank Council for their thoughtful analysis and advice.

Yours truly,



Gregory Sorbara
Minister

MEDICAL REQUIREMENTS IN TOXIC SUBSTANCE REGULATIONS

A DISCUSSION PAPER PREPARED FOR THE JOINT STEERING COMMITTEE ON HAZARDOUS SUBSTANCES IN THE WORKPLACE

VOLUME I

Program Development Unit
Policy and Regulations Branch
Occupational Health and Safety Division
Ministry of Labour

May, 1988

MEDICAL REQUIREMENTS IN TOXIC SUBSTANCE REGULATIONS

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EXECUTIVE SUMMARY

The purpose of this report is to provide an overview of the issues to the Joint Steering Committee on Hazardous Substances in the Workplace Joint Task Force on Medical Surveillance. It discusses the major issues relating to medical surveillance and medical examinations in the regulations established to control exposure to toxic substances.

The major issues are:

- mandatory medical surveillance;
- the role of a coordinating physician in medical surveillance programs; and
- "discretionary" or "one-time only" medical examinations.

The information contained in this report represents part of a major project which has been carried out by the Designated Substance Regulations (DSR) Review Committee. This Committee, consisting of representatives from the Occupational Health and Safety Division and the Legal Services Branch of the Ministry, was established in August 1986 to review and propose amendments to the present designated substance regulations. The Committee subsequently made recommendations to the Division Legislative Review Committee.

The purpose of the review was to clarify the meaning of the requirements and to ensure that the regulations were more enforceable. The review included an in-depth examination of requirements for medical surveillance and medical examination and an analysis of the issues surrounding medical requirements in toxic substance regulations.

The report includes a history of the development of the medical provisions for toxic substances, an analysis of the major issues, and a number of options

for alternative approaches to these issues. The advantages and disadvantages of each option are discussed briefly. In each case the preferred option(s) are indicated.

The options which Ministry officials believe merit further consideration are as follows:

- the elimination of provisions for medical surveillance from the regulations with guidelines being developed for workers, employers and physicians;

- consideration of the coordination of medical information as a function to be carried out by Labour-supported occupational health clinics; and

- removal of provisions for medical examinations and inclusion of a provision which would require the employer to notify and counsel workers following an exposure to a toxic substance.

The various appendices referred to in the report may be found in Volume II.

1.0 INTRODUCTION

This report examines the issues surrounding mandatory medical surveillance, the role of the coordinating physician and "discretionary" medical examinations with respect to regulations which control exposure to toxic substances.

Requirements for medical examinations and clinical tests are established under subsection 17(1) of the Occupational Health and Safety Act (the Act) as follows:

> 17. (1) "A worker shall,
>
> (e) where so prescribed, have, at the expense of the employer, such medical examinations, tests or x-rays, at such time or times and at such place or places as prescribed."

The control program requirements established in most of the existing designated substance regulations (DSRs) include provisions for mandatory medical surveillance of exposed workers. The minimum requirements for each substance are set out in each regulation in the Code for Medical Surveillance. The regulations also set out the duties of the worker, the employer, and the physician who carries out or supervises the medical examinations and clinical tests. A number of issues have arisen concerning mandatory medical surveillance programs which are discussed in detail in Section 2.0.

When the regulations were first developed, it was assumed that all medical examinations and clinical tests required in a medical surveillance program would be carried out by plant physicians. Provisions were not made for the collection and coordination of information if a number of physicians were examining workers under the medical surveillance requirements of a control

program. Since the question of who is to carry out the examinations and tests is not addressed in the regulations, workers are free to attend the physician of their choice. It has become clear that some workers prefer to have clinical tests and medical examinations carried out by their family physicians.

This preference has lead to a number of administrative problems which have indicated a need for a physician to act as a coordinator for medical surveillance information. The role of such a coordinator, and mechanisms for choosing and appointing a coordinator have been extensively discussed by Ministry officials. These issues are dealt with in detail in Section 3.0 of this report.

The Regulation respecting Arsenic, the Regulation respecting Ethylene Oxide, and the Regulation respecting Control of Exposure to Biological or Chemical Agents (O. Reg. 654/86) do not include provisions for medical surveillance programs. Rather, there are provisions for medical examinations which would not take place on a routine basis. When it is believed that a worker has been exposed to a toxic substance and health effects may have resulted, there are provisions in these regulations for a worker to be examined by a physician at the expense of the employer. These medical examinations, sometimes referred to as "discretionary examinations" as opposed to medical surveillance, and referred to by the Advisory Council on Occupational Health and Occupational Safety (ACOHOS) as "post-exposure mandatory examinations", do not constitute or lead to a medical surveillance program and the type of medical examinations and clinical tests are not specified in the regulations. In fact, they have been included in regulations for substances for which appropriate tests for routine monitoring are not currently available. The medical examination provisions set out in these regulations are discussed in detail in Section 4.0.

Medical requirements for various sector regulations are also prescribed under authority of section 17(1) of the Act. These regulations are the Diving Operations Regulation, Regulations for Construction Projects, and

Regulations for Mines and Mining Plants. Sections in these regulations relating to medical requirements are found in Appendix I. This report does not consider the medical provisions of these regulations, which deal with minimizing the risks associated with work in compressed air or the risks to others associated with sudden illness or incapacity of hoist and crane operators, but rather considers toxic substance regulations which deal with the relatively long-term health effects of chemical exposures.

2.0 MEDICAL SURVEILLANCE

Medical surveillance in the workplace is a controversial and highly emotional issue. While recognizing the potential usefulness of medical examinations in the maintenance of workers' health, Labour tends to view these examinations as a way of placing blame for health effects on the worker and of discriminating against certain classes of workers. Labour also objects to the fact that participation in medical surveillance programs is mandatory for workers covered under certain regulations.

Labour's objection to mandatory medical surveillance arose in part because of a belief that some company physicians under whose supervision these examinations are carried out are biased since they were hired by the employer. Other concerns include the confidentiality of worker's medical records.

Issues concerning medical surveillance programs were raised early in the history of the development of designated substance regulations. In 1980 and 1981 eight proposed designated substance regulations were published in The Ontario Gazette. All these regulations contained provisions for a medical surveillance program as part of the control program.

The proposed regulations required that medical examinations and clinical tests be conducted, but only with the consent of the worker. This provision stimulated considerable input from interested parties on the issue of voluntary versus mandatory medical surveillance programs.

The Ontario Federation of Labour (OFL) favoured the voluntary approach. However, many other respondents to the proposed regulations were strongly opposed to voluntary participation by workers in medical surveillance programs. Many respondents believed that if the programs were not mandatory, there would be insufficient participation by workers and therefore the programs would not be effective. It was argued that, without mandatory medical surveillance, an employer would be denied an important means of ensuring that a worker's health was safeguarded, yet would still be expected to bear the cost of compensating those workers. Employees might refuse medical examinations, fearing the loss of income if any detected health impairment could cause their removal from work. By the same token, employers could, by dissuading workers from undergoing medical examinations, hide any health impairment caused by exposure to a toxic substance.

Taking all these reasons into account the Ministry agreed that medical surveillance should be mandatory and that there should be no requirement for the consent of the worker. Furthermore, to ensure participation, a new section was added to the regulations, which required that a worker undergo the medical examinations and clinical tests set out in the program. By 1983 seven of the eight proposed regulations had been filed; they all required worker participation in medical surveillance programs as part of the control program established by the employer.

In October 1983, in response to the proposed formaldehyde and benzene regulations, the OFL submitted a brief outlining its views on medical surveillance. The OFL questioned whether medical monitoring had any use other than to permit secondary or tertiary intervention in a disease process that compliance with the regulation should have prevented in the first place. But of greater concern to the OFL were the human rights implications of medical surveillance. In summary, the OFL position was that medical surveillance programs must be:

- carried out by a physician of the worker's choice;
- designed so as to address the effect of exposures at work only;
- valid, useful and not create additional risk to the worker;
- voluntary with full informed consent on the part of the worker;
- completely confidential;
- carried out in such a way that no worker suffers from discrimination in any form;
- carried out so that workers receive full rate retention with seniority and benefits or full compensation when the test or examination finds an occupational disease; and
- carried out in conjunction with standards that protect all workers from health effects resulting from exposure and a complete right to know exactly what and how much the worker is exposed to on the job.

The Ministry responded to the OFL comments in its "Report to the Advisory Council on the Designation of Benzene in Ontario" (March 12, 1984). Ministry officials agreed with the OFL's view that medical monitoring does not serve as a primary prevention of disease, as shown by the fact that primary emphasis is placed in the designated substance regulations upon the control of exposure to a particular agent by means of engineering controls, work practices and hygiene practices and facilities. The objective of a medical surveillance program as set forth in the Code for Medical Surveillance was to protect the health of workers by:

- identifying workers with conditions which may be aggravated by exposure to a particular substance and establishing a baseline measure for determining changes in health;

- ensuring that even when ambient air criteria are met or when respiratory protection is used, the health of a worker is not at risk because of poor hygiene, work practices, or situations such as leaks or spills;

- enabling remedial action to be taken when necessary; and

- providing health education.

The Ministry reiterated its rationale for requiring mandatory medical surveillance programs and a decision was made not to revise the requirements for medical surveillance programs in the proposed benzene regulation.

It should be noted that the Canadian Charter of Rights and Freedoms could have considerable bearing on the use of medical examinations required by occupational health and safety regulations.

The Krever Commission (Report of the Commission of Inquiry into the Confidentiality of Health Information published in 1981) concluded that mandatory reporting "contradicts the underlying principle of the health-care relationship that an individual has a right to the confidentiality of health information about himself or herself, including the right to decide to whom the information may be released". However, the Commission did acknowledge that "mandatory reporting requirements exempt health-care professionals from a duty of confidentiality, in certain circumstances, by requiring him or her to report information which would otherwise be confidential".

This exemption is recognized in and permitted by the legislation governing the health-care provider. For example, it is considered to be professional misconduct for a physician to give information concerning a patient's condition or any professional services performed for a patient to anyone other than the patient, unless required to do so by law.

The Krever Commission indicated that the invasion of the privacy of the individual can be justified if the benefits which society derives from the information, in terms of the control or prevention of disease or bodily harm, outweighs the possible harm resulting from the loss of privacy.

The following recommendation of the Krever Commission is particularly relevant to the issue of medical examinations in occupational health and safety legislation:

> "98. That legislation requiring reporting by health-care providers not be enacted unless the following circumstances exist:
>
> (a) the information, in an identifiable form, is necessary to protect the health and well-being of the public or a substantial number of members of the public;
>
> (b) there is no other method by which the purpose could be accomplished; and
>
> (c) the benefit to the public or members of the public sought to be protected outweighs the risk to the subjects of the reports from the invasion of their privacy."

In October 1985, ACOHOS submitted Advisory Memorandum 85-II to the Minister (Appendix II). This memorandum dealt with issues concerning classification of health surveillance, health screening and biological monitoring procedures in workplace biomedical surveillance programs. In it, the Advisory Council recommended a number of basic and evaluative criteria to be used "as a basis for determining whether particular biomedical surveillance procedures produce more benefit than harm to the individual worker" (Appendix III).

The Council also considered the issue of whether procedures should be mandatory or voluntary. The Council noted that common law does not allow the performance of a medical procedure without the patient's consent, but acknowledged that individuals may be required to undergo medical tests or procedures as a condition of employment or because they are required to do so by a specific regulation.

Council considered three approaches to the issue of consent:

- all "approved" procedures should be mandatory;
- all "approved" procedures should be voluntary; and
- all procedures should be voluntary except where compulsory participation can be justified.

Council recommended the third option, that is, voluntary participation with possible exceptions. The Council recommended that the following criteria be applied to determine where participation should be compulsory:

- Who is at risk as a result of the worker's medical condition - the worker, co-workers, members of the public?
- What is the nature of the risk to co-workers or the public?
- What is the degree of risk to co-workers or the public?
- Is there a collective benefit of the surveillance, including detection of previously unsuspected health problems in a workplace or industry?
- Are there alternative methods of monitoring workers' exposure to a toxic substance in the workplace?

Council also recommended that workers required to undergo mandatory procedures be fully informed of the nature and effects of the procedures and of any employment consequences likely to result from refusal.

In responding to the Advisory Council (Appendix IV), the Minister of Labour, the Honourable William Wrye, indicated that the Ministry was already considering alternate approaches to the medical surveillance requirements in designated substance regulations. He further added that the Health Studies Service of the Ministry was reviewing the classification criteria suggested by Council with a view to applying the criteria to procedures to be set out in future regulations. In addition, he indicated that consideration would be given to using the criteria to re-evaluate medical procedures required in existing designated substance regulations.

As a result, in January 1986, provisions for a mandatory medical surveillance program were removed from the proposed chromium regulation and from the arsenic regulation prior to its final publication. In their place were substituted provisions for medical examinations at the request of the worker, the worker's physician or the employer.

In September 1986, an internal Occupational Health and Safety Division Committee, the DSR Review Committee, was established to review and propose amendments to the designated substance regulations, with a view to improving both the clarity and the enforceability of the regulations.

In November 1986, the Committee recommended a number of modifications to the medical surveillance provisions of the regulations to clarify the responsibilities of the parties involved and eliminate some of the confusion and ambiguity found in the existing regulations. Key changes included: the introduction of a coordinating physician, specific mechanisms for transmitting medical information between the appropriate parties where medical surveillance programs were required; the review of mandatory medical surveillance requirements based on the ACOHOS criteria from Memorandum 85-II; and amendments to the provisions for medical

examinations in regulations not requiring mandatory medical surveillance programs.

As mentioned earlier, the Health Studies Service reviewed the Advisory Council classification criteria for mandatory medical surveillance. These criteria were modified by the Health Studies Service and appear in Appendix V. The DSR Review Committee reviewed the mandatory medical surveillance requirements for the existing designated substance regulations using the revised criteria and proposed that mandatory medical surveillance be retained for:

- o lead;
- o mercury;
- o asbestos;
- o silica;
- o benzene; and
- o isocyanates.

The Committee recommended that mandatory medical surveillance programs be eliminated from the regulations respecting:

- o vinyl chloride;
- o acrylonitrile; and
- o coke oven emissions.

In the case of those substances for which mandatory medical surveillance was recommended, examinations and tests are judged to be useful in the prevention or amelioration of disease. In the case of those substances for which the elimination of medical surveillance is recommended, examinations and presently available tests are not useful in the prevention of disease, and provisions for voluntary medical health surveillance are not likely to be beneficial.

On November 13, 1987, the Occupational Health and Safety Division Legislative Review Committee (LRC) recommended that requirements for mandatory medical surveillance, including audiometric testing, be removed from the proposed noise regulation. The LRC also recommended that a guide be prepared which would be referred to in the regulation and which would include most of the elements of the Code for Audiometry and the Code for Medical Surveillance. These recommendations were accepted by the Minister on November 30, 1987.

The decision to remove mandatory medical surveillance from the proposed noise regulation represents a significant departure from the Ministry's previous position on medical surveillance and indicates that present medical surveillance requirements should be reviewed. In addition, the provisions for medical examinations and clinical tests which are included in O. Reg. 654/86 and a number of designated substance regulations, and provisions included in the Codes for Respiratory Equipment (under general requirements for the use of respirators) for medical referrals of workers who experience breathing difficulties during respirator use must also be reconsidered.

A number of alternate approaches to medical surveillance have been considered. The existing situation, where some designated substance regulations include provisions for mandatory medical surveillance with mandatory participation by workers, is presented as one option. Three options involving some elements of 'voluntary' participation are presented. Administrative aspects of medical surveillance which are common to any type of medical surveillance program, such as the duties and reporting responsibilities of physicians, are discussed in Section 3.0. This report discusses the following four options:

Option 1: Mandate medical surveillance programs as appropriate with mandatory participation by workers.

Option 2: Mandate medical surveillance programs as appropriate with voluntary participation by workers.

Option 3: Eliminate provisions for medical surveillance from the regulations and publish guidelines which could be referenced in the regulation.

Option 4: Give workers the right to request medical examinations and tests at the expense of the employer.

Option 1: Mandate medical surveillance programs as appropriate with mandatory participation by workers.

As was stated previously, the pros and cons of this option have been widely discussed since the beginning of the designated substance regulation development process. They can be summarized briefly as follows:

Pros:

- It should ensure participation by all workers covered under the regulation control program.
- It should result in a complete and consistent program in all affected workplaces.
- It provides a mechanism for identifying health effects which may previously have gone unrecognized as well as identifying ineffective controls.

Cons:

- It does not give workers the choice of participation.
- It may not be acceptable to Labour.

- Mandatory participation is difficult to enforce.

- Information obtained from the physician could be used inappropriately.

Extensive education of workers and employers would be required to optimize the effectiveness of the following voluntary options. Adoption of any one of these options, either alone or in combination, may eliminate some of the benefits to be derived from mandatory medical surveillance such as the identification of previously unknown health effects for a collective worker population, the recognition of failures of control measures which cannot be detected by other means, and the usefulness of data for epidemiological studies.

Option 2: Mandate medical surveillance programs as appropriate with voluntary participation by workers.

This option would place the onus on the employer to make provisions for a medical surveillance program at the request of one or more workers. The employer would pay for examinations and tests.

The model lead regulation which was developed by the DSR Review Committee could be adapted to require the employer to offer a medical surveillance program under the following circumstances:

1) when the exposure of a worker to the designated substance equals or exceeds 50% of the time-weighted average exposure limit; and

2) when one or more workers request a program.

The training provisions of the model could be expanded to include requirements for education and training related to medical surveillance.

A model regulation including these provisions is found in Appendix VI.

If the model for medical surveillance preferred by the DSR Review Committee was adopted, the employer would receive advice on the worker's fitness for continued exposure. Logically, there are two ways in which the employer could act on such advice. One is to take remedial action in the workplace, and the other is to remove the worker or to limit his or her exposure. Either of these options, or some combination of the two, may be appropriate depending upon the circumstances. Depending upon the substance, remedial action in the workplace might not be sufficient to protect the worker's health and temporary or permanent removal might be necessary. In this case, an employer could be required to treat a worker who has volunteered for medical surveillance in a different manner than a worker who has refused medical surveillance. Such unequal treatment might be grounds for a challenge of the constitutionality of the legislation or regulations establishing it, based on the Canadian Charter of Rights and Freedoms.

Subsections 14(5) and (6), and 15(5), (6) and (7) of the model regulation found in Appendix VI require the employer to comply with work limitations specified by the physician who examines a worker who voluntarily undergoes a medical examination. Ministry legal counsel has advised that, if these sections were challenged in the courts, they might be struck out as being contrary to section 15 of the Charter of Rights and Freedoms. If such provisions were to be considered in legislation, further research into the constitutionality of such provisions is advisable.

Labour would be unlikely to object to removal of unfit workers if those workers were guaranteed income replacement. Income replacement is in fact required as part of the U.S. OSHA lead regulation, so such a provision would not be unprecedented. However, this type of payment is likely to fall under the jurisdiction of the Workers' Compensation Board (WCB) and may not be a viable option unless initiated by the Board.

It may be argued that it is inappropriate to require the employer to pay for voluntary examinations and tests if the employer has in fact lost all or part of the benefit of a mandatory surveillance program.

Once a worker has chosen to participate in a medical surveillance program on a voluntary basis, it might be appropriate to require the worker to participate in all aspects of the program. However, it is doubtful whether such a requirement is enforceable. For this reason, this requirement was not included in the model regulation.

The pros and cons of this option can be summarized as follows:

Pros:

- Participation by workers would be voluntary.
- It would protect the worker's privacy.
- It would conform to many of Labour's recommendations.
- It would result in a more complete and consistent program in all workplaces.

Cons:

- It might eliminate the benefits of medical surveillance except to the individual worker (benefits to other workers, identification of health effects, identification of ineffective controls).
- It would require the employer to pay for examinations with a reduced expectation of derived benefit.
- It could result in unequal treatment of workers which may contravene the Charter.
- It would require the establishment of a medical program which may not be effective if only a few workers participated.

- o The requirement for judgement of fitness may not be acceptable and may result in lower participation of workers.

- o It would be difficult to enforce.

Option 3: Eliminate provisions for medical surveillance from the regulations and publish guidelines which would be referenced in the regulations.

At one time the proposed chromium regulation contained references to voluntary medical surveillance. However, comments on the proposed regulation showed that the respondents found the references confusing. They stated that it was unclear whether medical surveillance should be mandatory for a workplace and voluntary for individual workers, or whether it should be completely voluntary. Ultimately, it was decided that, if medical surveillance was to be voluntary, no reference to it should be included in the regulation.

The removal of all provisions for medical surveillance from designated substance regulations could be coupled with publication of appropriate guidelines for the worker, the employer and the physician. The guide could be referenced in the regulation as part of education and training provisions. The cost of examinations could be covered by OHIP or the employer. It has yet to be determined if OHIP would cover such costs.

The content of the guidelines would be determined based upon the nature of the hazard and the existence of appropriate tests which would have some benefit to the worker.

A model regulation incorporating this option is found in Appendix VII. However, at the present time no guidelines have been developed.

The pros and cons of this option can be summarized as follows:

Pros:

- All participation in medical examinations and tests would be voluntary.
- The worker's privacy would be protected.
- It would conform to Labour's recommendations.

Cons:

- The employer may not be informed of health trends in the workplace.
- It could eliminate the benefits of medical surveillance except to the individual worker.
- It might require the employer to pay for examinations which have no overall benefit if worker participation is limited.
- OHIP might not pay for tests relating to exposures in the workplace.

Option 4: Give workers the right to request medical examinations and tests at the expense of the employer.

This is similar to the provision presently included in some designated substance regulations which allows the worker, the worker's physician or the employer to request medical examinations and tests if it is believed that the worker's health has been affected by exposure. In this case, however, only the worker would have the right to request examinations. This would certainly protect the worker's right to privacy, but the need for an examination may not always be recognized by workers or management and it is possible health effects could go undetected. This option is included in section 15 of the model regulation incorporating voluntary medical surveillance (Appendix VI).

The pros and cons of this option can be summarized as follows:

Pros:

- All participation in medical examinations and tests would be voluntary.
- It would conform to Labour's recommendations.
- The worker's privacy would be protected.

Cons:

- It could eliminate the benefits of medical surveillance except those to the individual worker.
- It would require the employer to pay for examinations with a reduced expectation of any overall benefit if worker participation is limited.
- It could result in unequal treatment of workers which may contravene the Charter.
- There may be situations where a request may be unreasaonble.

The above options have all been carefully considered by Ministry officials. In light of the recent recommendation by the LRC to remove medical surveillance from the proposed noise regulation (and to develop guidelines which would include most of the elements in the current audiometry code and medical surveillance code for noise-exposed workers) and the Minister's agreement in principle that provisions for workers to undergo "post-exposure" medical examinations should not be included in the regulations, Option 3 is being carefully considered by Ministry officials.

A further issue which relates to medical surveillance in general is the relationship between the Workers' Compensation Act and the designated substance regulations. Ministry legal counsel has advised that references to Workers' Compensation entitlement found in the existing designated substance regulations are without jurisdiction. The DSR Review Committee and the LRC have recommended that these provisions be removed. At present, in cases where criteria for removal are not well defined, workers may be removed from exposure to designated substances based on the judgement of the examining physician. The worker may then submit a claim for compensation to the Workers' Compensation Board, only to find that he or she does not meet the WCB's criteria for compensation.

It has been suggested that there should be agreement between the Ministry and the WCB on the criteria for removal, whether medical surveillance is mandatory or voluntary, and that guidelines should be established to assist examining physicians in making determinations regarding fitness and removal. This is particularly important in light of the relatively small number of physicians knowledgeable in occupational medicine.

3.0 COORDINATING PHYSICIAN

It is recognized that a worker has the right to select the physician of his or her choice to serve as the examining physician under a medical surveillance program. As a result, workers from a single workplace may be attending more than one physician who performs or supervises the required examinations and tests. Such a situation may compromise the effectiveness of the medical surveillance program for the following reasons:

- Many of the examining physicians may be general practitioners with no specific training in occupational medicine. As a result, they may be unfamiliar with the toxicology of the designated substance and with appropriate examination procedures and tests. They may also be unacquainted with their responsibilities under the Act and regulations.

- The examining physician is likely to be unfamiliar with exposure conditions in the particular workplace. This could present problems in terms of assessing the possibility of overexposure to the substance, and determining what work limitations may be appropriate.

- Where there are a number of physicians conducting medical examinations and tests on different workers, it may not be possible to detect trends in health effects that would indicate problems related to overexposure.

- The lack of consolidation of medical surveillance results may cause difficulties if it later becomes necessary to review the medical surveillance records for purposes such as epidemiological research or documentation for worker compensation claims.

- Where each worker attends his or her own physician, it is very difficult to monitor for compliance with the requirements of the medical surveillance program.

It has been proposed by ACOHOS in Advisory Memorandum 83-III (Appendix VIII), and by some interested parties and Ministry officials that a provision should be made in the designated substance regulations for a physician to coordinate the transfer and reporting of information relating to the medical surveillance of workers. The Ministry refers to such a physician as the "coordinating physician".

As part of their review of medical surveillance, the DSR Review Committee examined this issue. Initially, the Committee believed that instituting requirements for a coordinating physician would correct existing problems in medical surveillance programs in the following ways:

- The coordinating physician would have a knowledge of the particular workplace and, ideally, experience in occupational medicine. He or she

would therefore be able to serve as a resource to examining physicians who may need guidance in carrying out their responsibilities under the regulation.

- The coordinating physician would monitor for compliance with the requirements of the medical surveillance program by ensuring receipt of Medical Surveillance Forms required by the regulation and reviewing the completed forms.

- Consolidation of the Medical Surveillance Forms by the coordinating physician would detect any trends indicating an exposure problem in the workplace and facilitate future review of the forms if necessary.

However, after extensive discussion, it was concluded that Labour might find it inappropriate for the coordinating physician to provide guidance or assistance to the examining physician, especially in the judgement of fitness. It was believed that coordinating physicians might still be perceived as being "the company doctor". Therefore, it was decided that the role of the coordinating physician should only be administrative: to ensure that the medical information required under the regulation is received, analyzed, and transmitted as prescribed by the regulation and to recognize trends in occupational illness. He or she would not make any judgement about the fitness of workers.

The Minister supported the concept of appointing a coordinating physician to administer mandatory medical surveillance programs, believing it to be essential to the success of medical surveillance programs across the province.

The present medical surveillance requirements in the designated substances regulations are as follows:

- medical examinations and clinical tests of a worker are required under the control program;
- requirements for medical examinations and tests are set out in the regulations and Codes;
- a worker is required to undergo these examinations and tests at the expense of the employer;
- each worker may have required medical examinations and clinical tests carried out by the physician of his or her choice;
- physicians have certain specified recordkeeping and reporting functions; and
- there is no requirement for appointment of a physician to coordinate the medical surveillance program.

The points in favour of the present approach are:

- the worker is allowed a free choice of physician; and
- many employers and physicians will comply with the intent of the regulation, although some of the requirements are not strictly enforceable.

The points against the present approach are:

- there is no mechanism to ensure that the requirements of the regulations and codes are met;
- there is no mechanism to summarize and analyze the results of all tests and examinations to determine the overall pattern of health effects in the workplace;

- medical examinations and clinical tests are only a part of the control program, and, in a prosecution, a judge may find that the control program requirements have essentially been met even when requirements for examinations and tests are not met;

- duties under the Act and regulations are not presently enforceable against physicians;

- medical surveillance provisions are enforceable only against an employer; and

- there is no mechanism to protect either employers or workers against abuse of the system.

The roles of the examining and coordinating physicians, as envisioned by the DSR review process, are set out below.

The examining physician would be chosen by the worker to:

- examine the worker and judge fitness;

- transmit the necessary forms to the worker, the employer and the coordinating physician;

- notify parties as required by the regulations; and

- determine frequency of examinations for workers judged unfit or fit with limitations and determine work limitations for those workers found to be fit with limitations.

The coordinating physician would:

- serve as a "clearinghouse" for medical information required by the DSRs;
- ensure that medical forms received from the examining physicians are in compliance with the Code (the form would include only exposure-related information);
- prepare an annual report based on information provided by the examining physicians and give it to the employer and the joint health and safety committee;
- determine frequency of mandatory examinations for a given workplace or part of a workplace based on existing conditions;
- retain information for the period required by the regulations; and
- notify parties as required by the regulations.

In order to properly fulfill the duties required of the coordinating physician, the individuals chosen should be experienced and knowledgable in occupational medicine and should be familiar with the workplace. It may be difficult to find qualified individuals to undertake the coordinating function as proposed because there are not a large number of physicians who are qualified in occupational medicine. In addition, the strictly administrative nature of the work may not interest many practising physicians.

The DSR Review Committee considered a number of mechanisms for the appointment of the coordinating physician. Ultimately the Committee proposed that the coordinating physician should be appointed by the employer. The reasons for this recommendation were as follows:

- the worker has the sole right to choose the examining physician who determines fitness, and therefore has considerable protection of his or her right to privacy;

- the inclusion of a prescribed medical surveillance form in the DSRs would ensure the transmission of only exposure-related health information as required by the medical surveillance code;

- the coordinating physician is a clearinghouse for information and does not judge fitness; and

- the duty to appoint the coordinating physician can be enforced against the employer, but not, for instance, against the joint health and safety committee, and the coordinating physician will be a vital part of the medical surveillance program.

The Committee also recommended that a provision be included in the regulations that stated explicitly that the worker has a right to choose an examining physician to carry out medical examinations and tests and to judge fitness. This right is inferred but has not been explicitly stated before which has caused some confusion among workplace parties.

On April 6, 1987, the Minister was briefed on the medical surveillance issues. He did not agree that the coordinating physician should be appointed by the employer and requested that additional options be developed on how the coordinating physician should be appointed. The factors considered in the development of these options included:

- acceptability to both labour and management;

- availability of qualified occupational health and safety personnel;

- access to services; and

- o enforceability of regulatory requirements.

Legal counsel advised that the option or options chosen must deal with two key enforcement-related issues. These are:

- o ensuring that a coordinator is chosen as required; and

- o ensuring that duties are enforceable against physicians.

Legal counsel also advised the internal committee that, to satisfy the Charter of Rights, any option or combination of options must provide equal benefits for workers throughout the province.

Subsequently, an internal Ministry committee developed a wide range of options for coordination of medical surveillance programs. One or more of these options, either singly or in combination, may be capable of providing the necessary services to coordinate medical information throughout the province. Since the options were developed for discussion purposes, options were not discounted solely on the basis of cost or because of a need for cooperation with other Ministries, although these factors were taken into account in the discussion of the pros and cons of each option.

The list of options for mechanisms to appoint the coordinating physician is outlined below.

1. Existing Public Health Care Delivery Systems

   Option 1: Community Health Centres;
   Option 2: Health Service Organizations;
   Option 3: Public Health Units; and
   Option 4: Hospitals.

2. Private Initiatives

Option 5: Physicians in Private Practice; and
Option 6: Shared Workplace Occupational Health and Safety Services.

3. New Organizational Models

Option 7: Non-Profit Occupational Health Services;
Option 8: Physicians Selected from an Approved Roster; and
Option 9: Occupational Health Services Established by Community Boards.

4. Government Agencies

Option 10: WCB-Established Occupational Health Services;
Option 11: Government-Established Occupational Health Services;
Option 12: Physicians Employed by the Ministry of Labour; and
Option 13: Existing Ministry of Labour Funded Health and Safety Resource Centres.

5. Other Options

Option 14: Labour-Run Occupational Health Clinics; and
Option 15: Physician Selected by the Joint Health and Safety Committee.

These options and their advantages and disadvantages are discussed in detail in Appendix IX.

In summary, it is recognized that if the internal responsibility system is working effectively in a workplace the employer should, in consultation with the Joint Health and Safety Committee, be able to select a coordinating physician who is agreeable to all parties.

However, this is not always the case and disputes over the selection of a coordinating physician could seriously delay the implementation of any medical surveillance program. Ministry officials gave serious consideration to introducing a provision to require the selection of the coordinating physician to be carried out by the Joint Health and Safety Committee. However, legal counsel advised that, at the present time, such a provision would be unenforceable under the Act. Although a wide variety of options were discussed at length there was considerable concern among Ministry officials as to which option would be the most effective.

The recent establishment of two government-funded, Labour-supported occupational health clinics in Hamilton and Toronto, may merit consideration in resolving this issue. It may be possible that the clinics could carry out the coordination of medical information.

4.0 MEDICAL EXAMINATIONS

A further issue for the DSR Review Committee was the provisions for "one time only" or "discretionary" medical examinations which are found in a number of toxic substance regulations. It follows that many of the issues discussed in this section are also relevant to the question of whether all medical requirements in toxic substance regulations should be mandatory or voluntary.

Provisions for discretionary medical examinations were introduced in January 1986, when mandatory medical surveillance was removed from the proposed chromium regulation prior to its initial publication, and from the arsenic regulation prior to its final publication. The decision to remove mandatory medical surveillance from the proposed chromium regulation and the arsenic regulation was prompted by the issues raised by the OFL and the Advisory Council. It was apparent that these two substances did not meet the Advisory Council criteria for mandatory medical surveillance, particularly as there are no specific tests or procedures which can be used for early diagnosis and prevention of the occupational diseases of concern among arsenic or chromium workers.

Since it was believed that situations might arise where a worker could be exposed and should receive a medical examination to determine his or her fitness to continue working in chromium or arsenic exposure, a provision was added to the regulations which allowed for such examinations at the request of the worker, the worker's physician or the employer. These examinations are not part of an on-going medical surveillance program. The Health and Safety Support Services Branch (HSSSB) requested that such a provision be included so that employers could be required to provide medical examinations where the need arose.

Similar approaches were taken in the ethylene oxide regulation, O. Reg. 654/86, the proposed formaldehyde and styrene regulations and the proposed designated substance regulations for the construction sector (which were favourably received by the construction industry).

The arsenic regulation allows for medical examinations or tests at the request of the worker or the worker's physician, if either of these individuals has reason to believe that the worker's health has been affected by arsenic exposure. There is also a provision for examinations or tests at the request of the employer if the employer has reason to believe that the worker's health is likely to be affected by exposure. This distinction between the requirements to be met by employers and workers caused a number of unfavourable comments with respect to the proposed chromium regulation, which was published in January 1986.

The arsenic regulation allows for dispute resolution, but does not include a provision which would allow the Chief Physician to order examinations. Such a provision was added to the ethylene oxide regulation, O. Reg. 654/86, and to the revised proposed chromium and styrene regulations.

A further discussion of the history of this issue, taken from "The Report to the Advisory Council on the Designation of Ethylene Oxide in Ontario", is included in Appendix X.

As was previously mentioned, a number of respondents who commented on the proposed chromium regulation objected to the distinction between the basis on which a worker and an employer could request discretionary medical examinations. These respondents suggested that either party be allowed to request an examination if they have reason to believe that the worker's health may be affected by exposure. In light of this concern, and after careful consideration, the DSL Review Committee recommended that workers and employers be allowed to request examinations on the same basis. This provision was incorporated into the Regulation respecting Ethylene Oxide, filed March 24, 1987, and is found in Appendix XI.

The Committee also recommended that all designated substance regulations include a provision for "discretionary" medical examinations for the following reasons:

- it allows workers not covered by mandatory medical surveillance programs to request medical examinations, at the expense of the employer, when they have concerns about possible exposure-related health problems;

- it allows workers covered by mandatory medical surveillance programs to request medical examinations, at the expense of the employer, when they have concerns about possible exposure-related health problems which arise between regularly scheduled examinations; and

- it makes provisions for medical examinations, at the expense of the employer, in case of accidents or other unexpected events.

Mandatory Examinations Versus Voluntary Examinations

Based on their experience, Ministry officials estimate that worker participation in mandatory programs ranges from 80 to 90 per cent and a voluntary medical program would range from 50 to 70 per cent.

Some basic questions to be answered when considering mandatory versus voluntary medical examinations are:

- Will provisions for mandatory medical examinations significantly improve the degree of compliance by workers?
- Will the benefits to society or to other workers justify mandatory examinations?
- Would the Ministry prosecute workers to force compliance with mandatory medical examinations?

Options for Dealing with Medical Examinations

There are a number of issues relating to the present provisions for medical examinations. These include:

- labour or employers may view these medical examinations as being mandatory;
- there is a perception that inspectors will be judging disputes without consulting Ministry physicians;
- it is possible that inspectors may be perceived as being biased in favour of employers; and
- there may be human rights issues (Canadian Charter of Rights and Freedoms) and questions relating to the benefits of medical examinations for workers and society.

The following options were developed by the DSR review committee when the question of medical examinations was reviewed, and are presented for discussion purposes:

Option 1: Include provisions for workers, employers, and the chief physician to request medical examinations.

Option 2: Include provisions for workers and employers only to request medical examinations.

Option 3: Include provisions for workers only to request medical examinations.

Option 4: Include provisions for medical examinations only where the criteria for mandatory medical surveillance are met.

Option 5: Include provisions for examinations following an event which may have affected the worker's health.

Option 6: Include provisions which require the employer to notify and counsel workers following exposure.

Option 1: Include provisions for workers, employers, and the chief physician to request medical examinations.

This option is incorporated in some of the current and proposed regulations at the present time. The DSR Review Committee believed that the provision was in the best interests of the worker, in that it allowed reasonable access to medical examinations at the expense of the employer and the discretion of the worker. The Committee believed that the interests of the worker would be protected by the provision for dispute of an employer's request for an examination and the right to appeal any order issued by the Chief Physician.

The pros and cons for the retention of the existing provision for medical examinations are:

Pros:

- It provides a mechanism for addressing the exposure-related health concerns of workers not covered by a medical surveillance program.
- It provides a mechanism for addressing the exposure-related health concerns of workers covered by a medical surveillance program when such concerns arise between regularly scheduled examinations required under the medical surveillance program.
- It provides a mechanism for addressing exposure-related health concerns which arise as a result of spills or accidents.
- It includes notification and dispute provisions to protect both workers and employers.

Cons:

- The provision may be interpreted as requiring mandatory testing.
- There may be unreasonable requests in a dispute.
- The decisions of the Ministry or its inspectors in a dispute, including physicians classed as inspectors, may be seen as being biased.
- There is a lack of specific tests for exposure to many substances.
- It may conflict with the worker's rights as guaranteed by the Charter.
- It may be unenforceable.

Option 2: Include provisions for workers and employers only to request medical examinations.

This option would allow either of the workplace parties to request medical examinations. The introduction of a dispute clause would offer both parties protection from unreasonable or frivolous requests, although, as has been discussed in previous options, the impartiality of Ministry officials might be called into question.

The pros and cons of this options are:

Pros:

- It provides a mechanism for addressing the exposure-related health concerns of both workplace parties.
- It maintains the internal responsibility system for dealing with exposure-related health concerns.

Cons:

- It does not provide a mechanism for addressing exposure-related health concerns by the Chief Physician.
- It leaves the responsibility for requesting examinations with the parties who may be unaware of potential hazards or who may have vested interests in overlooking them.
- It may be unenforceable.

Option 3: Include provisions for workers only to request medical examinations.

This would allow the worker to request medical examinations at the employer's expense. The employer and the Chief Physician would then be unable to require a worker to undergo medical examinations. The inclusion of a dispute clause would give the employer some protection against frivolous or unreasonable requests, although it would also introduce the concerns about the impartiality of Ministry staff which were noted above.

The pros and cons of this option are:

Pros:

- It reduces the likelihood of infringing the human rights of the worker.
- It could include a dispute clause to provide protection against unreasonable requests.
- It would provide a mechanism for addressing workers' exposure-related health concerns.

Cons:

- It does not provide a mechanism for addressing employers' concerns about exposure-related health concerns.
- It may have some bearing on employer liability, especially if a worker whose health has been affected chooses to continue working in exposure.
- It does not provide a mechanism for addressing the Chief Physician's concerns about exposure-related health problems.

Option 4: Include provisions for medical examinations only where the criteria for mandatory medical surveillance are met.

This would eliminate medical examinations from designated substance regulations which do not include mandatory medical surveillance programs or for which its removal has been recommended by the DSR Review Committee. This option could be used in combination with any of Options 1, 2 or 3.

The pros and cons of this option are:

Pros:

- Examinations would only be required where some benefit could reasonably be expected.
- It might reduce the potential for disputes.

Cons:

- It would limit the options of workers or employers with legitimate concerns regarding exposure-related health effects in the absence of mandatory medical surveillance.
- It would require a thorough and very time-consuming review of the tests available for all substances covered by the regulations, including those covered by O. Reg. 654/86.

Option 5: Include provisions for examinations following an event which may have affected the worker's health.

Any of the preceding four options could be modified to allow examinations following an event for which there are reasonable grounds to believe that the worker's health may be affected. The main difficulty lies in defining the

"event" so that the provision will be enforceable and not unreasonably restrictive. If the definition is vague then the provision is likely to be unenforceable. If the definition is too restrictive, then events where health is at risk may not be dealt with.

The pros and cons of this option are:

Pros:

- Examinations would only be required where there is likely to be a real need.

Cons:

- The provision will be very difficult to develop so that it is enforceable and can be applied effectively.

Option 6: Include provisions which require the employer to notify and counsel workers following exposure.

If the provision for medical examinations were eliminated from the regulations, and the employer were required to notify and counsel the worker following an exposure, the worker would still have the option of having an examination conducted by his or her own physician. The employer might also be required to inform the Ministry.

The examination could be billed to OHIP unless grounds for a Worker's Compensation claim were found, or the employer could be required to pay for it. The second option would seem to be preferable, since it might be considered to be inappropriate to shift financial responsibility for such an examination from the employer to the taxpayer.

The pros and cons of this option are:

Pros:

- It should minimize concerns about infringement of the rights of the worker since the worker would decide whether to consult a physician.

- It simplifies the enforcement of the regulations.

Cons:

- It will be difficult to determine a meaning of "exposure" in the legal sense which will be appropriate for inclusion in regulations.

About the same time the Committee began their examination of concerns which had been expressed about the provisions for medical requirements in toxic substance regulations, the Advisory Council struck a Task Force to carry out an extensive review of what Council termed as "mandatory post-exposure medical examinations". The Task Force met with Ministry officials in September 1987 to discuss the rationale for including provisions for medical examinations in a number of the designated substance regulations. On December 29, 1987, Advisory Memorandum 87-V, Concerning Mandatory Post-exposure Medical Examinations, was forwarded to the Minister (Appendix XII).

In his response to the Advisory Council on February 10, 1988, the Minister stated that Ministry officials were in the process of carrying out an extensive review of provisions for "post-exposure medical examinations" as part of their overall review of medical surveillance issues. He further stated that the memorandum would be an important element of this review and that Ministry officials were in agreement with many aspects of Council's analysis. In closing, he indicated he was prepared to accept in principle ACOHOS Recommendation 87-8 that the Minister of Labour ensure that regulations under the Act do not include provisions requiring workers to

undergo "post-exposure medical examinations". However, he added that he intended to request that the Joint Steering Committee on Hazardous Substances in the Workplace review this issue.

Of the options developed, Option 6, which would require the employer to notify and counsel workers following exposure, and Option 4, which would include provisions for medical examinations only where the criteria for mandatory medical surveillance are met, were preferred by Ministry officials. In light of the Minister's response, these options merit further consideration.

Addendum to
Medical Requirements in
Toxic Substance Regulations

A Discussion Paper Prepared for the Joint Steering Committee on Hazardous Substances in the Workplace

On March 18, 1988 the Advisory Council on Occupational Health and Occupational Safety submitted to the Minister Advisory Memorandum 87-VI, entitled Concerning Mandatory Health Surveillance. The Memorandum and the Minister's response to the Advisory Council, dated June 20, 1988 can be found as Appendix I. The Memorandum deals with the rationale and justification for mandatory health surveillance and related issues and sets out Council's position on circumstances which would justify the mandating of health surveillance. Council previously submitted Advisory Memorandum 87-V, "Concerning Mandatory Post-exposure Medical Examinations" which was included in the discussion paper.

For the purposes of Memorandum 87-VI, Council has defined health surveillance as follows:

> "the continuing or periodic examination of groups of workers for the purpose of diagnosing impairment or disease. Such surveillance may include serial physical examinations, biological testing of body fluids, and selected appropriate laboratory tests."

Many of the issues raised in the Memorandum have been considered by Ministry officials and are addressed in the May 1988 discussion paper. These issues include whether medical surveillance programs should entail mandatory or voluntary participation by workers, whether employers should be required to provide and pay for such programs if worker participation is not mandatory, and whether there is a need to set out provisions in the legislation for a coordinating physician.

Note: Council's Advisory Memorandum 87-VI and the minister's response are included in council's Tenth Annual Report

In addition, the Memorandum questions whether there should be provisions in the Occupational Health and Safety Act to protect the confidentiality of the health records of workers participating in health surveillance programs and whether health surveillance should be used to assess fitness to work.

In the Memorandum Council puts forth the following recommendations:

ACOHOS Recommendation 87-9

That worker participation in health surveillance be mandated only in circumstances where:

(a) it would identify a medical condition that would prevent a worker from performing his or her job safely, thereby causing a significant risk to the health or safety of the public or other workers; and

(b) there are valid and effective procedures to make such a determination.

ACOHOS Recommendation 87-10

That the Minister of Labour ensure that an employer is required to offer and pay for health surveillance programs,

(a) that can be demonstrated to be a "precaution reasonable in the circumstances for the protection of a worker"; and

(b) where there are valid and effective tests.

ACOHOS Recommendation 87-11

That the Minister of Labour develop a mechanism involving labour and management to appoint a committee of independent medical and scientific experts to advise the Minister as to whether:

(a) particular biomedical surveillance procedures are valid and effective; and

(b) they are reasonable precautions for protecting workers' health.

ACOHOS Recommendation 87-12

That the Minister of Labour develop a strategy for educating workers, managers and occupational health personnel about the need to consider the purpose, function and validity of all biomedical surveillance procedures that are included in health surveillance programs and stress that if no valid procedures exist that can achieve the objectives of the program, the program should not be offered.

ACOHOS Recommendation 87-13

That the Minister of Labour provide for the protection of the confidentiality of a worker's health record in the occupational health and safety legislation.

After examining the issues concerning the need to include provisions in the legislation for a coordinating physician, Council concluded that there is no need to include any such provisions in the occupational health and safety legislation. In part, this conclusion is based on Council's belief that although there may be certain benefits to appointing a coordinating physician with respect to monitoring control systems or detecting unrecognized effects of a particular agent, these benefits did not justify mandating provisions for a

coordinating physician. In addition, Council believed that where health surveillance was mandated, the criteria and reporting systems are clearly stated.

Council also considered the issue of whether or not health surveillance should be used to assess a worker's fitness to work. However, it was concluded that this issue should be addressed as a separate and distinct issue and it was not included in the Memorandum.

In Recommendation 87-11 Council states that the Minister should involve representatives of labour and management in the selection of a committee of independent medical and scientific experts to determine whether particular biomedical surveillance procedures are valid, effective and constitute reasonable precautions for protecting workers' health. These issues should be discussed by the Joint Task Force on Medical Issues.

ADMINISTRATION

Legal Mandate of the Advisory Council

Section 10, the Occupational Health and Safety Act

Advisory Council on Occupational Health and Occupational Safety

10.—(1) There shall be a council to be known as the Advisory Council on Occupational Health and Occupational Safety composed of not fewer than twelve and not more than twenty members appointed by the Lieutenant Governor in Council on the recommendation of the minister.

Term of office of members

(2) The members of the advisory council shall be appointed for such term as the Lieutenant Governor in Council determines and shall be representative of management, labour and technical or professional persons and the public who are concerned with and have knowledge of occupational health and occupational safety.

Chairman and vice-chairman

(3) The Lieutenant Governor in Council shall designate a chairman and a vice-chairman of the advisory council from among the members appointed.

Vacancies

(4) The Lieutenant Governor in Council may fill any vacancy that occurs in the membership of the advisory council.

Remuneration and expenses

(5) The remuneration and expenses of the members of the advisory council shall be determined by the Lieutenant Governor in Council and shall be paid out of the moneys appropriated therefor by the Legislature.

Powers of advisory council

(6) The advisory council, with the approval of the minister, may make rules and pass resolutions governing its procedure, including the calling of meetings, the establishment of a quorum, and the conduct of meetings.

Idem

(7) The function of the advisory council is and it has power,

a) to make recommendations to the minister relating to programs of the ministry in occupational health and occupational safety; and

b) to advise the minister on matters relating to occupationalhealth and occupational safety which may be brought to its attention or be referred to it.

Annual report

(8) The advisory council shall file with the minister not later than the 1st day of June in each year an annual report upon the affairs of the advisory council.

Idem

(9) The minister shall submit the report to the Lieutenant Governor in Council who shall cause the report to be laid before the assembly if it is in session or, if not, at the next ensuing session. R.S.O. 1980, c.321, s.10.

Primary objective of advisory council

To advise the Minister of Labour on all matters relative to occupational health and safety in Ontario.

Secondary objectives of advisory council

1. To ensure as far as is possible that the policies and programs in occupational health and safety effectively minimize the risks to health and safety in all workplaces in Ontario.
2. To ensure as far as is possible that knowledge about occupational health and safety is available to management, labour and the public and that it is understood by them.
3. To assist in promoting and establishing mechanisms involving management and labour to solve problems in occupational health and safety.
4. To ensure as far as is possible that there is appropriate manpower training and development for the occupational health and safety field.
5.* To review periodically the effectiveness of the policies and programs implemented to achieve secondary objectives 1 to 4.

Terms of reference of advisory council

1. To make recommendations on matters referred to it by the minister, submitted to it by interested parties or pursued by the council on its own initiative.
2. To advise the minister on programs in the field of occupational health and safety.
3. To advise the minister on policies, principles and procedures used in standard setting and in the development of guidelines to be used by the government.
4. To review and make recommendations to the minister on the introduction of new substances such as chemicals into the workplace.
5. To review and make recommendations on the detection, measurement and control of occupational health and safety hazards in the workplace.
6. To review and make recommendations about the arrangements for occupational health and safety for groups and areas where there are no formal health and safety programs or the programs are judged to be inadequate.
7. To advise the minister on priorities for research and development in occupational health and safety.
8. To advise the minister on priorities for manpower training and development in the field of occupational health and safety.
9. To prepare an annual report to the minister, which shall include the advisory memoranda, recommendations of the council and the government response.

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* *added June 1980*

Meetings of the Advisory Council

April 12, 1988
May 26, 1988*
May 27, 1988*
June 14, 1988
July 12, 1988**
September 13, 1988***
October 11, 1988
November 8, 1988
December 13, 1988****
January 10, 1989†
February 14, 1989††
March 14, 1989

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* Two day session held in Vineland, Ontario.
** Included discussion with Deputy Minister, Assistant Deputy Minister, OHSD and ministry officials.
*** Included discussion with Minister.
**** Included discussion with Minister. Followed by dinner meeting with Deputy Minister, Assistant Deputy Minister, OHSD and ministry officials.
† Included discussion with Assistant Deputy Minister, OHSD.
†† Included presentation by Vice-President, Policy and Specialized Services Division, WCB.

TASK FORCES

TASK FORCES OF ADVISORY COUNCIL ON OCCUPATIONAL HEALTH AND OCCUPATIONAL SAFETY

TASK FORCE ON SMALL BUSINESS

Terms of Reference

1) Review the *Occupational Health and Safety Act* and regulations and the ministry's policies regarding enforcement to identify differences in application for large and small workplaces.
2) Review data regarding the levels of occupational safety and health achieved in small as compared to large workplaces.
3) Review current initiatives to address the problems of health and safety in small workplaces being undertaken by associations, organizations and government departments in Ontario.
4) Review methods used in large companies to deliver health and safety practices to small units within a large workplace and/or to geographically distinct workplaces.
5) Identify significant factors that cause occupational health and safety conditions to differ between small and large workplaces, such as:
   - access to materials, resources and training;
   - motivating factors;
   - current means of disseminating information, etc.
6) Analyse the current policies and initiatives to determine whether they take into account the differences in conditions and whether the goal is uniform protection of health and safety in all workplaces (regardless of size).
7) Recommend strategies and means of implementing strategies to deal with the problems of health and safety in small workplaces.
8) Recommend means of auditing the effectiveness of the strategies (and their implementation) identified in 7.

Members

Council

D. Dewees – chairman
R.T. Boldt (to November 1988)
T. Byrne
D.R. McCalla
D.G. Morrison
H.D. Moyer (from January 1989)
C.J. Tuohy
D. Ublansky

Others

J. Brophy — Windsor Occupational Health Information Service, Windsor
J.M. Andrew — Canadian Federation of Independent Business, Willowdale

Meetings Held

May 4, 1988
June 23, 1988*
September 27, 1988
November 1, 1988
January 26, 1989**
March 16, 1989***

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* Included meeting with ministry officials.

** Included meetings with President, Dry Cleaners and Launderers Institute, Toronto and Program Co-ordinator, Lakeshore Area Multi-Service Project (LAMP), Toronto.

*** Included meetings with Director, Occupational Health and Safety Resource Centre, Queen's University, Kingston and representative of Toronto Workers' Health and Safety Legal Clinic.

TASK FORCE ON OCCUPATIONAL HEALTH AND SAFETY EDUCATION AND TRAINING

Terms of Reference

1) To review current arrangements and structures for occupational health and safety education and training in Ontario and other jurisdictions.
2) To review previous recommendations by council regarding or pertinent to occupational health and safety education and training.
3) To recommend strategies for enhancing the quality, delivery and coverage of education and training for workplace parties, and, in so doing, consider the potential for joint strategies with other government ministries/agencies and means of evaluation.

Membership

D.R. McCalla – chairman
J. Divitt
R. Falconer
G. Nipshagen (to December 1988)
H.D. Moyer
D.B. Smith (from January 1989)
C.J. Tuohy

Meetings Held

April 25, 1988*
June 21, 1988
September 13, 1988
October 11, 1988
November 3, 1988
January 19, 1989
February 21, 1989

Reports To Council

November 8, 1988

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* Included meeting with ministry officials.

Other Meetings – Ad Hoc Task Groups of Council

Small Group*	April 29, 1988
Consultation and Coordination of the Regulatory Process Task Group**	August 18, 1988

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* D.R. McCalla (chairman), J.C. Divitt, R. Falconer, H.D. Moyer, G.M. Nipshagen, C.J. Tuohy.

** C.J. Tuohy, J.L. West.

APPENDICES

APPENDIX A
Fatal and Non-Fatal Disabling Injuries[1] Initially Settled in Ontario in 1987 and 1988, Classified by Nature of Injury

Nature of Injury	Non-Fatal Disabling Injuries 1987	Fatalities 1987	Non-Fatal Disabling Injuries 1988	Fatalities 1988
	No.	No.	No.	No.
Traumatic Injuries				
Amputation or enucleation	673	0	579	1
Asphyxia, strangulation, drowning	0	4	2	3
Burn or scald — heat	4,599	3	4,502	6
Concussion — brain, cerebral	332	0	372	0
Contusion, crushing, bruise — intact skin	40,462	96	42,118	77
Cut, laceration, puncture — open wound	25,972	1	25,819	1
Dislocation	669	0	699	0
Electric shock, electrocution	250	6	230	10
Fracture	9,013	4	8,368	3
Hernia, rupture	1,758	0	1,605	0
Scratches, abrasions — superficial wounds	6,346	0	6,428	0
Sprains, strains	97,686	2	101,565	1
Multiple injuries	975	5	1,031	5
Occupational injury, NEC[2]	5,368	8	4,777	6
Total Traumatic Injuries	194,103	129	198,095	113
Occupational Diseases/Illnesses				
Burn — chemical	1,463	0	1,454	0
Tuberculosis only	5	0	0	0
Tuberculosis and pneumoconiosis	1	0	1	0
Contagious or infectious disease, NEC	379	0	288	1
Dermatitis	787	0	750	0
Freezing, frostbite & other envir. cold	29	1	52	0
Hearing loss or impairment	1,004	0	1,121	0
Heat — sun-stroke — envir. heat	35	0	36	0
Bursitis	55	0	52	0
Synovitis, tenosynovitis	1,560	0	1,361	0
Inflammation or irritation of joints, tendons, etc. NEC	749	0	794	0
Poisoning, systemic	1,087	2	972	2
Silicosis	6	1	5	0
Asbestosis	8	1	10	3
Pneumoconioses, NEC	46	0	48	0
Radiation effects	943	0	1,008	0
Caisson's disease	2	0	0	0
Occupational illnesses, NEC	164	56	132	156
Total Diseases/Illnesses	8,323	61	8,084	162
Non-personal damage	59	0	60	0
Preventative measures	0	0	0	0
Nature of injury unknown	316	5	568	23
Total	202,801	195	206,807	298

1. Claims are considered initially settled when there has been no change in the status of the claim for three months past the end of the month of the last status change.
2. Not elsewhere classified.

Source: Workers' Compensation Board of Ontario.

APPENDIX B
Temporary Total Days Lost Up to Initial Settlement for Industries in Ontario 1983–1988[1]

Major Economic Divisions	*1983* *(000)*	*1984* *(000)*	*1985* *(000)*	*1986* *(000)*	*1987* *(000)*	*1988* *(000)*
Agriculture	93.9	110.4	103.2	120.7	93.3	90.1
Forestry and Logging	69.8	85.1	83.9	100.6	81.2	67.2
Fishing, Trapping	1.6	1.0	1.5	2.2	1.9	0.9
Mining, Quarries and Oil Wells	180.9	179.6	160.6	164.9	167.7	117.9
Manufacturing	1,896.7	2,331.9	2,427.0	2,631.0	2,636.2	2,710.1
Construction	810.5	934.9	900.0	964.0	965.1	905.6
Transportation, Communication and other Utilities	468.1	587.3	578.7	637.9	618.3	585.2
Trade	582.8	735.5	771.5	833.1	852.6	833.0
Services*	699.3	881.6	938.9	105.0	1,054.5	1,025.9
Public Administration	295.0	348.0	389.0	365.8	385.2	366.2
Unknown	1.0	0.0	-	-	-	
Total**	5,099.6	6,195.3	6,354.2	6,872.6	6,856.0	6,702.2

* Services includes SIC categories Finance, Insurance, Real Estate and Community, Business and Personal Services.

** Total may not add due to rounding.

1. Shows days lost due to temporary total disability up to initital settlement for claims initially settled in year indicated, by industry (SIC Major Division). Days lost due to death, permanent disability and for medical aid only and light duty (temporary partial disability) are not included.

Source: 1983: Canadian Centre for Occupational Health and Safety – from WCB's Statistics System.
1984–88: Workers' Compensation Board of Ontario.

APPENDIX C
Temporary Total Days Lost Up to Initial Settlement by Occupation in Ontario 1983–1988[1]

Occupation	*1983* (000)	*1984* (000)	*1985* (000)	*1986* (000)	*1987* (000)	*1988* (000)
Managerial	23.3	25.1	23.7	30.1	25.1	18.7
Natural Science	30.8	32.3	30.8	28.3	32.0	34.5
Social Science	12.6	19.2	20.4	22.0	22.6	19.7
Religion	0.9	0.1	0.8	0.0	0.0	0.1
Teaching	16.0	17.7	18.5	23.5	22.6	24.9
Medicine and Health	163.4	212.7	230.6	260.4	229.4	215.1
Artistic and Recreational	8.4	10.3	9.9	10.7	13.1	11.0
Clerical	199.9	245.1	264.5	272.1	296.4	299.7
Sales	122.0	140.8	159.4	184.4	168.4	153.7
Service	487.4	603.7	637.9	663.8	698.9	660.1
Agriculture	101.2	129.3	121.7	139.1	108.9	107.2
Fishing, Hunting, Trapping	0.9	1.0	2.1	2.1	1.7	1.0
Forestry and Logging	78.0	89.7	89.2	99.6	81.6	81.7
Mining and Quarrying	114.6	104.5	93.0	98.1	87.1	67.7
Processing	350.3	428 2	425.4	475.1	472.0	441.8
Machining	401.8	483.4	495.8	523.0	529.4	532.1
Product Fabricating	713.7	871.3	942.8	1,043.9	1,062.4	1,050.8
Construction Trades	798.4	901.5	878.7	954.9	942.3	824.4
Transport Equipment Operation	432.6	523.8	537.6	587.0	555.5	507.1
Material Handling	265.4	353.7	332.1	395.0	392.1	391.3
Other Craft and Equipment Operation	41.5	50.1	50.4	59.0	61.4	57.2
Not Stated	364.1	485.7	513.7	564.4	631.5	771.1
Occupation, NEC	372.3	466.0	475.2	436.2	421.6	431.8
Total	5,099.6	6,195.3	6,354.2	6,872.6	6,856.0	6,702.2

* Totals may not add due to rounding.

1. Shows days lost due to temporary total disability up to initial settlement for claims initially settled in year indicated, by occupation (OCM 2-digit). Days lost due to death, permanent disability and for medical aid only and light duty (temporary partial disability) are not included.

Source: 1983: Canadian Centre for Occupational Health and Safety – from WCB's Statistics System.
1984–88: Workers' Compensation Board of Ontario.

APPENDIX D
Temporary Total Days Lost Up to Initial Settlement by Nature of Injury in Ontario 1983–1988[1]

Nature of Injury	*1983* (000)	*1984* (000)	*1985* (000)	*1986* (000)	*1987* (000)	*1988* (000)
Traumatic Injuries						
Amputation or enucleation	54.7	67.2	46.0	54.7	54.6	47.5
Asphyxia, strangulation, drowning	0.0	0.0	0.0	0.0	0.0	0.0
Burn, scald	46.9	58.4	59.9	53.5	62.1	61.4
Concussion	22.3	19.9	20.6	20.2	19.8	18.4
Contusion, bruise	423.6	566.4	775.8	940.4	1,015.0	1,005.3
Cut, laceration	293.6	356.4	382.5	393.4	430.8	404.4
Dislocation	34.0	33.2	32.5	43.5	40.3	39.4
Electric shock	6.7	7.5	8.2	6.6	5.9	11.7
Fracture	524.7	560.7	518.6	530.3	565.2	497.6
Hernia, rupture	65.9	69.8	70.9	77.7	75.8	73.1
Scratches, abrasions	25.8	32.7	33.5	34.6	36.4	36.0
Sprain, strain	1,937.6	2,659.0	2,941.1	3,574.8	3,677.3	3,790.5
Multiple injuries	124.9	121.6	121.9	126.2	118.4	116.7
Occupational injuries, unspecified	1,332.9	1,377.7	1,116.6	772.8	478.0	320.8
Occupational injuries, NEC	4.5	4.5	3.8	3.7	5.6	4.8
Total Traumatic Injuries	4,898.1	5,935.0	6,131.9	6,632.4	6,585.2	6,427.6
Occupational Diseases/Illnesses						
Burn, chemical	13.0	10.1	10.4	11.5	15.2	13.8
Tuberculosis only	0.0	0.3	0.4	0.1	0.1	0.0
Tuberculosis and pneumoconiosis	0	0.1	0	0.2	0.2	0.0
Contagious, infectious disease, NEC	6.9	6.2	4.9	3.9	7.8	4.8
Dermatitis	17.1	19.6	17.9	19.8	22.8	20.0
Freezing, frostbite	1.2	3.0	1.3	1.9	1.1	1.1
Hearing loss or impairment	0.0	0.6	0.0	0.1	0.2	0.1
Heat, sun-stroke	0.1	0.2	0.0	0.0	0.2	0.3
Bursitis	1.4	1.6	1.7	3.0	3.7	4.6
Synovitis, tenosynovitis	23.3	31.1	39.8	68.2	88.5	89.7
Inflammation, irritation of joints, tendons, etc. NEC	13.9	23.2	25.2	41.4	47.9	73.3
Poisoning, systemic	6.9	5.8	9.6	11.2	14.8	17.4
Silicosis	0.1	0.6	0.0	0.7	0.3	1.0
Asbestosis	0.0	1.4	0.2	0.1	0.6	0.8
Pneumoconioses, NEC	1.7	2.8	2.6	2.5	3.8	3.1
Radiation effects	3.4	2.4	2.7	2.6	3.3	4.2
Caisson's disease	0.4	0.0	0.0	0.1	0.0	0.0
Occupational illnesses, NEC	11.9	16.9	15.0	17.1	24.7	26.0
Total Diseases/Illnesses	101.3	125.9	131.7	184.4	235.2	260.2
Non-personal damage	0.4	0.5	0.4	0.5	0.6	0.3
Preventative measures	0.0	0.0	0.0	0.1	0.0	0.0
Nature of injury unknown	99.7	133.7	90.1	55.2	35.3	14.1
Total*	5,099.6	6,195.3	6,354.2	6,872.6	6,856.0	6,702.2

* Totals may not add due to rounding of the data.

1. Shows days lost due to temporary total disability up to initial settlement for claims initially settled in year indicated, by nature of injury. Days lost due to death, permanent disability and for medical aid only and light duty (temporary partial disability) are not included.

Source: 1983: Canadian Centre for Occupational Health and Safety – from WCB's Statistics System.
1984–88: Workers' Compensation Board of Ontario.

APPENDIX E

Count of Fatal and Non-Fatal and Days of Temporary Total Disability[1] by SIC[2] for Disabling Injury Claims Initially Settled in 1987 and 1988 — WCB Schedule 1 Employers

	1987				1988			
INDUSTRY	*Number of Claims*			*Days of Temporary Total Disability (000)*	*Number of Claims*			*Days of Temporary Total Disability (000)*
	Fatal	*Non-Fatal*	*Total*		*Fatal*	*Non-Fatal*	*Total*	
011 Livestock and Livestock Combination Farms	0	395	395	20.5	2	400	402	14.3
013 Field Crop and Field Crop Combination Farms	0	347	347	17.5	0	338	338	19.3
015 Fruit and Vegetable Farms	1	246	247	12.2	1	166	167	10.0
017 Other Crop and Livestock Combination Farms	1	423	424	18.0	5	423	428	20.2
019 Miscellaneous Specialty Farms	*1*	*598*	*599*	*17.5*	*1*	*579*	*580*	*18.0*
02 Farms (except Experimental and Institutional Farms)	*3*	*2,009*	*2,012*	*85.7*	*9*	*1,906*	*1,915*	*81.8*
021 Services Incidental to Agriculture	0	313	313	7.7	0	251	251	8.4
03 Services Incidental to Agriculture	*0*	*313*	*313*	*7.7*	0	251	251	8.4
01 Agriculture	**3**	**2,322**	**2,325**	**93.3**	**9**	**2,157**	**2,166**	**90.1**
031 Logging	5	978	983	80.2	2	810	812	66.7
01 Logging	*5*	*978*	*983*	*80.2*	*2*	*810*	*812*	*66.7*
039 Forestry Services	0	18	18	1.0	0	23	23	0.5
02 Forestry Services	*0*	*18*	*18*	*1.0*	*0*	*23*	*23*	*0.5*
02 Forestry	**5**	**996**	**1,001**	**81.2**	**2**	**833**	**835**	**67.2**
041 Fishing	0	40	40	1.5	0	22	22	0.9
01 Fishing	*0*	*40*	*40*	*1.5*	*0*	*22*	*22*	*0.9*
045 Fishery Services	0	3	3	0.1	0	1	1	0.0
02 Fishery Services	*0*	*3*	*3*	*0.1*	*0*	*1*	*1*	*0.0*
047 Hunting and Trapping	0	3	3	0.3	0	1	1	0.0
03 Hunting and Trapping	*0*	*3*	*3*	*0.3*	*0*	*1*	*1*	*0.0*
03 Fishing and Trapping	**0**	**46**	**46**	**1.9**	**0**	**24**	**24**	**0.9**

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
051 Placer Gold Mines	0	30	30	2.1	0	28	28	1.7
052 Gold Quartz Mines	2	285	287	23.4	127	264	391	13.6
057 Uranium Mines	19	401	420	28.0	8	292	300	16.6
058 Iron Mines	0	29	29	2.1	2	35	37	2.0
059 Miscellaneous Metal Mines	18	894	912	63.7	9	762	771	41.4
01 Metal Mines	*39*	*1,639*	*1,678*	*119.3*	*146*	*1,381*	*1,527*	*75.4*
064 Crude Petroleum and Natural Gas Industry	0	15	15	0.2	0	16	16	1.1
02 Mineral Fuels	*0*	*15*	*15*	*0.2*	*0*	*16*	*16*	*1.1*
071 Asbestos Mines	2	3	5	0.4	1	4	5	0.0
072 Peat Extraction	0	10	10	0.3	0	9	9	0.2
073 Gypsum Mines	0	7	7	0.0	0	5	5	0.2
079 Miscellaneous Non-Metal Mines	0	103	103	4.4	0	86	86	3.3
03 Non-Metal Mines (except Coal Mines)	*2*	*123*	*125*	*5.1*	*1*	*104*	*105*	*3.5*
083 Stone Quarries	0	118	118	4.2	0	133	133	3.2
087 Sand Pits or Quarries	1	217	218	9.7	0	223	223	7.1
04 Quarries and Sand Pits	*1*	*335*	*336*	*13.9*	*0*	*356*	*356*	*10.4*
096 Contract Drilling for Petroleum	0	9	9	0.6	0	27	27	0.4
098 Other Contract Drilling	0	174	174	12.5	0	230	230	11.3
099 Miscellaneous Services Incidental to Mining	2	280	282	16.0	1	289	290	15.8
05 Services Incidental to Mining	*2*	*463*	*465*	*29.1*	*-1*	*546*	*547*	*27.5*
04 Mines (Including Milling) Quarries and Oil Wells	**44**	**2,575**	**2,619**	**167.7**	**148**	**2,403**	**2,551**	**117.9**
101 Meat and Poultry Products Industries	1	2,405	2,406	94.4	1	2,397	2,398	87.2
102 Fish Products Industry	0	128	128	4.9	0	127	127	3.9
103 Fruit and Vegetable Processing Industries	0	959	959	32.5	1	962	963	31.8
104 Dairy Products Industry	0	882	882	26.3	0	837	837	25.7
105 Flour and Breakfast Cereal Products Industry	0	156	156	5.5	0	168	168	5.2
106 Feed Industry	1	301	302	7.3	0	267	267	7.6
107 Bakery Products Industry	0	1,101	1,101	48.1	0	1,117	1,117	45.4
108 Miscellaneous Food Industries	0	1,498	1,498	54.3	0	1,563	1,563	50.9
109 Beverage Industries	1	1,319	1,320	31.2	1	1,415	1,416	34.2
01 Food and Beverage Industries	*3*	*8,749*	*8,752*	*304.4*	*3*	*8,853*	*8,856*	*291.9*

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
151 Leaf Tobacco Processors	0	16	16	0.3	0	20	20	0.7
153 Tobacco Products Manufacturers	0	72	72	1.6	1	67	68	3.1
02 Tobacco Products Industries	*0*	*88*	*88*	*1.9*	*1*	*87*	*88*	*3.9*
162 Rubber Products Industries	0	1,474	1,474	53.5	0	1,347	1,347	54.6
165 Plastics Fabricating Industry NES	1	3,700	3,701	107.4	0	3,942	3,942	116.8
03 Rubber and Plastics Products Industries	*1*	*5,174*	*5,175*	*160.9*	*0*	*5,289*	*5,289*	*171.3*
172 Leather Tanneries	0	127	127	5.8	0	155	155	7.9
174 Shoe Factories	0	329	329	12.6	0	279	279	11.5
175 Leather Glove Factories	0	10	10	0.1	0	11	11	1.0
179 Luggage Handbag and Small Leather Goods Manufacturers	0	287	287	9.4	0	312	312	11.9
04 Leather Industries	*0*	*753*	*753*	*28.0*	*0*	*757*	*757*	*32.4*
181 Cotton Yarn and Cloth Mills	0	143	143	2.7	0	132	132	3.7
182 Wool Yarn and Cloth Mills	0	120	120	2.7	0	157	157	6.6
183 Manmade Fibre Yarn and Cloth Mills	1	298	299	9.5	0	391	391	9.8
184 Cordage and Twine Industry	0	49	49	0.9	0	48	48	1.3
185 Felt and Fibre Processing Mills	0	81	81	4.7	0	79	79	3.6
186 Carpet Mat and Rug Industry	0	312	312	11.8	0	311	311	10.5
187 Canvas Products and Cotton and Jute Bags Industry	0	74	74	2.7	0	128	128	3.6
188 Automobile Fabric Accessories Inudstry	0	186	186	6.5	0	292	292	11.3
189 Miscellaneous Textile Industries	0	659	659	27.0	0	640	640	22.9
05 Textile Industries	*1*	*1,922*	*1,923*	*68.6*	*0*	*2,178*	*2,178*	*73.3*
231 Hosiery Mills	0	96	96	3.8	0	82	82	4.2
239 Knitting Mills Except Hosiery Mills	0	378	378	9.3	0	360	360	12.4
06 Knitting Mills	*0*	*474*	*474*	*13.1*	*0*	*442*	*442*	*16.5*
243 Men's Clothing Industries	0	490	490	23.8	0	556	556	22.6
244 Women's Clothing Industries	0	214	214	9.1	0	182	182	11.2
245 Children's Clothing Industry	0	46	46	3.4	0	50	50	3.3
246 Fur Goods Industry	0	16	16	3.0	0	8	8	0.6
248 Foundation Garment Industry	0	22	22	0.3	0	28	28	0.8
249 Miscellaneous Clothing Industries	0	262	262	11.4	0	293	293	11.0
07 Clothing Industries	*0*	*1,050*	*1,050*	*51.0*	*0*	*1,117*	*1,117*	*49.4*

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
251 Sawmills Planing Mills and Shingle Mills	5	812	817	34.6	1	866	867	32.1
252 Veneer and Plywood Mills	0	204	204	9.5	0	198	198	7.2
254 Sash Door and Other Millwork Plants	0	1,672	1,672	43.6	0	1,791	1,791	41.2
256 Wooden Box Factories	0	273	273	5.8	0	256	256	5.6
258 Coffin and Casket Industry	0	19	19	0.4	1	13	14	0.2
259 Miscellaneous Wood Industries	0	552	552	14.2	0	581	581	13.8
08 Wood Industries	*5*	*3,532*	*3,537*	*108.1*	*2*	*3,705*	*3,707*	*100.1*
261 Household Furniture Manufacturers	0	1,882	1,882	55.9	0	1,975	1,975	62.2
264 Office Furniture Manufacturers	0	520	520	12.2	0	510	510	15.6
266 Miscellaneous Furniture and Fixtures Manufacturers	0	975	975	34.3	0	898	898	30.4
268 Electric Lamp and Shade Manufacturers	0	42	42	1.3	0	30	30	2.3
09 Furniture and Fixture Industries	*0*	*3,419*	*3,419*	*103.6*	*0*	*3,413*	*3,413*	*110.4*
271 Pulp and Paper Mills	3	629	632	36.5	5	567	572	37.4
272 Asphalt Roofing Manufacturers	0	50	50	2.3	0	61	61	1.7
273 Paper Box and Bag Manufacturers	1	972	973	37.6	1	1,002	1,003	36.2
274 Miscellaneous Paper Converters	0	854	854	27.3	0	847	847	26.0
10 Paper and Allied Industries	*4*	*2,505*	*2,509*	*103.7*	*6*	*2,477*	*2,483*	*101.3*
286 Commercial Printing	0	1,474	1,474	37.9	0	1,488	1,488	33.7
287 Platemaking Typsetting and Trade Industries	0	128	128	3.7	0	133	133	4.7
288 Publishing Only	0	176	176	4.4	1	158	159	3.5
289 Publishing and Printing	1	335	336	8.4	0	389	389	8.7
11 Printing Publishing and Allied Industries	*1*	*2,113*	*2,114*	*54.5*	*1*	*2,168*	*2,169*	*50.6*
291 Iron and Steel Mills	1	2,708	2,709	114.2	5	2,831	2,836	138.5
292 Steel Pipe and Tube Mills	0	301	301	10.1	0	296	296	10.6
294 Iron Foundries	1	939	940	24.0	1	1,163	1,164	22.7
295 Smelting and Refining	0	82	82	7.4	1	83	84	6.6
296 Aluminum rolling Casting and Extruding	0	330	330	11.6	0	285	285	9.6
297 Copper and Copper Alloy Rolling Casting and Extruding	0	230	230	6.4	0	310	310	10.2
298 Metal Rolling Casting and Extruding NES	0	687	687	21.8	0	653	653	19.8
12 Primary Metal Industries	*2*	*5,277*	*5,279*	*195.4*	*7*	*5,621*	*5,628*	*218.0*

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
301 Boiler and Plate Works	2	440	442	14.0	0	326	326	14.4
302 Fabricated Structural Metal Industry	2	791	793	28.6	1	755	756	23.4
303 Ornamental and Architectural Metal Industry	0	1,106	1,106	41.6	1	1,133	1,134	32.6
304 Metal Stamping, Pressing and Coating Industry	0	3,597	3,597	95.2	0	3,787	3,787	97.4
305 Wire and Wire Products Manufacturers	0	1,025	1,025	30.4	0	967	967	25.4
306 Hardware Tool and Cutlery Manufacturers	0	1,533	1,533	41.5	0	1,624	1,624	42.6
307 Heating Equipment Manufactuers	0	447	447	16.2	0	462	462	12.0
308 Machine Shops	1	1,281	1,282	37.4	1	1,495	1,496	35.6
309 Miscellaneous Metal Fabricating Industries	0	2,429	2,429	74.8	0	2,712	2,712	77.3
13 Metal Fabricating Ind. (Except Machinery and Transportation Equipment)	*5*	*12,649*	*12,654*	*379.8*	*3*	*13,261*	*13,264*	*360.7*
311 Agricultural Implement Industry	0	582	582	20.6	1	581	582	14.7
315 Miscellaneous Machinery and Equipment Manufacturing	2	3,598	3,600	88.6	2	3,699	3,701	92.9
316 Commercial Refrigeration & Air Conditioning Equipment	0	210	210	6.7	0	208	208	7.2
318 Office and Store Machinery Manufacturers	0	198	198	5.2	1	236	237	4.4
14 Machinery Industries (Except Electrical Machinery)	*2*	*4,588*	*4,590*	*121.1*	*4*	*4,724*	*4,728*	*119.2*
321 Aircraft and Aircraft Parts Manufacturers	1	1,510	1,511	40.5	0	1,487	1,487	40.6
323 Motor Vehicle Manufacturers	0	8,052	8,052	313.9	0	7,956	7,956	348.1
324 Truck Body and Trailer Manufacturers	0	1,115	1,115	23.1	0	1,390	1,390	22.2
325 Motor Vehicle Parts and Accessories Manufacturers	0	5,967	5,967	174.5	2	6,369	6,371	203.6
326 Railroad Rolling Stock Industry	0	579	579	14.1	0	569	569	15.4
327 Shipbuilding and Repair	1	124	125	5.6	0	117	117	4.3
328 Boatbuilding and Repair	0	237	237	7.6	0	205	205	8.4
329 Miscellaneous Vehicle Manufacturers	0	32	32	2.4	0	18	18	1.2
15 Transportation Equipment Industries	*2*	*17,616*	*17,618*	*581.8*	*2*	*18,111*	*18,113*	*643.8*
331 Manufacturers of Small Electric Appliances	0	200	200	8.6	1	181	182	7.6
332 Manufacturers of Major Applicances Electric & Non-Electric	0	623	623	21.8	0	588	588	24.9
333 Manufacturers of Lighting Fixtures	0	195	195	9.3	0	176	176	9.6
334 Manufacturers of Household Radio and Television	0	355	355	12.6	0	394	394	15.3
335 Communications Equipment Manufacturers	1	762	763	20.7	2	800	802	25.7

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
336 Manufacturers of Electrical Industrial Equipment	2	1,180	1,182	40.7	0	1,186	1,186	44.5
338 Manufacturers of Electric Wire and Cable	0	148	148	6.3	0	161	161	6.0
339 Manufacturers of Miscellaneous Electrical Products	0	585	585	17.9	0	647	647	24.7
16 Electrical Products Industry	*3*	*4,048*	*4,051*	*137.8*	*3*	*4,133*	*4,136*	*158.2*
351 Clay Products Manufacturers	0	189	189	4.3	0	194	194	3.8
352 Cement Manufacturers	1	74	75	1.4	0	92	92	1.6
353 Stone Products Manufacturers	0	40	40	1.7	0	42	42	1.4
354 Concrete Products Manufacturers	0	586	586	21.4	1	671	672	21.7
355 Ready Mix Concrete Manufacturers	1	388	389	13.8	0	408	408	15.7
356 Glass and Glass Products Manufacturers	0	1,042	1,042	28.7	0	1,285	1,285	33.7
357 Abrasives Manufacturers	0	141	141	7.0	0	147	147	4.0
358 Lime Manufacturers	0	7	7	0.1	0	7	7	0.0
359 Miscellaneous Non-Metallic Mineral Products Industries	4	503	507	25.1	3	408	411	16.1
17 Non-Metallic Mineral Products Industries	*6*	*2,970*	*2,976*	*103.5*	*4*	*3,254*	*3,258*	*98.1*
365 Petroleum Refineries	0	80	80	3.0	1	70	71	2.0
369 Miscellaneous Petroleum and Coal Products Industries	0	19	19	0.5	1	12	13	0.2
18 Petroleum and Coal Products Industries	*0*	*99*	*99*	*3.6*	*2*	*82*	*84*	*2.2*
372 Manufacturers of Mixed Fertilizers	0	45	45	1.8	0	31	31	0.6
373 Manufacturers of Plastics and Synthetic Resins	0	170	170	5.0	0	145	145	3.7
374 Manufacturers of Pharmaceuticals and Medicines	0	302	302	8.3	0	296	296	10.0
375 Paint and Varnish Manufacturers	0	237	237	5.2	0	211	211	5.2
376 Manufacturers of Soap and Cleaning Compounds	0	133	133	5.0	0	146	146	3.5
377 Manufacturers of Toilet Preparations	0	158	158	6.1	0	177	177	5.1
378 Manufacturers of Industrial Chemicals	0	286	286	10.6	2	271	273	9.4
379 Miscellaneous Chemical Industries	0	510	510	12.0	1	603	604	13.3
19 Chemical and Chemical Products Industries	*0*	*1,841*	*1,841*	*54.0*	*3*	*1,880*	*1,883*	*50.9*
391 Scientific and Professional Equipment Industries	0	523	523	18.1	0	584	584	16.2
392 Jewellery and Silverware Industry	0	149	149	6.4	0	137	137	7.9
393 Sporting Goods and Toy Industries	0	327	327	9.7	0	351	351	10.8
397 Signs and Displays Industry	0	274	274	11.5	0	312	312	9.2
399 Miscellaneous Manufacturing Industries NES	0	540	540	14.7	0	493	493	11.8
20 Miscellaneous Manufacturing Industries	*0*	*1,813*	*1,813*	*60.4*	*0*	*1,877*	*1,877*	*55.9*
05 Manufacturing Industries	**35**	**80,680**	**80,715**	**2,635.1**	**41**	**83,429**	**83,470**	**2,708.1**

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
404 Building Construction	7	4,202	4,209	226.6	7	4,190	4,197	217.0
406 Highway Bridge and Street Construction	4	702	706	61.0	2	700	702	53.3
409 Other Construction	10	841	851	67.9	5	855	860	60.3
01 General Contractors	*21*	*5,745*	*5,766*	*355.5*	*14*	*5,745*	*5,759*	*330.5*
421 Special Trade Contractors	28	12,393	12,421	609.1	25	12,377	12,402	574.1
02 Special-Trade Contractors	*28*	*12,393*	*12,421*	*609.1*	*25*	*12,377*	*12,402*	*574.1*
06 Construction Industry	**49**	**18,138**	**18,187**	**964.6**	**39**	**18,122**	**18,161**	**904.7**
501 Air Transport	4	429	433	9.3	3	354	357	9.1
502 Services Incidental to Air Transport	0	132	132	3.4	0	119	119	1.8
503 Railway Transport	0	14	14	0.2	0	13	13	0.2
504 Water Transport	0	75	75	2.4	0	92	92	3.8
505 Services Incidental to Water Transport	0	62	62	4.5	0	84	84	4.8
506 Moving and Storage Used Goods Uncrated	0	523	523	18.2	0	476	476	13.7
507 Other Truck Transport	14	5,195	5,209	216.4	13	5,407	5,420	199.9
508 Bus Transport Interurban and Rural	0	129	129	8.2	0	149	149	5.4
509 Urban Transit Systems	0	178	178	4.3	0	202	202	6.8
512 Taxicab Operations	1	92	93	7.7	0	107	107	7.9
515 Pipeline Transport	0	18	18	0.5	0	20	20	0.7
516 Highway and Bridge Maintenance	0	52	52	1.4	0	75	75	2.4
517 Miscellaneous Services Incidental to Transportation	1	158	159	6.1	0	120	120	4.6
519 Other Transportation	0	467	467	17.5	0	515	515	17.3
01 Transportation	*20*	*7,524*	*7,544*	*300.0*	*16*	*7,733*	*7,749*	*278.5*
524 Grain Elevators	0	151	151	7.6	1	132	133	4.3
527 Other Storage and Warehousing	0	443	443	11.1	0	454	454	14.2
02 Storage	*0*	*594*	*594*	*18.7*	*1*	*586*	*587*	*18.6*
543 Radio and Television Broadcasting	0	176	176	3.3	0	166	166	3.5
544 Telephone Systems	1	24	25	0.4	0	29	29	1.2
545 Telegraph and Cable Systems	0	0	0	0.0	0	7	7	0.0
548 Post Office	0	12	12	0.3	0	19	19	1.2
03 Communications	*1*	*212*	*213*	*3.9*	*0*	*221*	*221*	*6.0*

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
572 Electric Power	0	289	289	7.8	1	292	293	6.5
574 Gas Distribution	0	156	156	2.9	0	162	162	2.6
576 Water Systems	0	60	60	1.6	0	83	83	1.6
579 Other Utilities	0	372	372	11.8	1	423	424	13.2
04 Electric Power, Gas and Water Utilities	*0*	*877*	*877*	*24.1*	*2*	*960*	*962*	*24.0*
07 Transportation, Communications and Other Utilities	**21**	**9,207**	**9,228**	**346.7**	**19**	**9,500**	**9,519**	**327.1**
602 Wholesalers of Farm Products	0	121	121	3.7	0	132	132	4.2
606 Wholesalers of Coal and Coke	0	13	13	0.9	0	14	14	1.4
608 Wholesalers of Petroleum Products	0	261	261	8.6	0	316	316	11.8
611 Wholesalers of Paper and Paper Products	0	288	288	5.5	0	275	275	7.0
612 Wholesalers of General Merchandise	0	14	14	0.3	0	7	7	0.3
614 Wholesalers of Food	1	1,736	1,737	54.2	2	1,682	1,684	47.1
615 Wholesalers of Tobacco Products	0	77	77	2.6	0	78	78	1.7
616 Wholesalers of Drugs and Toilet Preparations	0	158	158	6.1	0	178	178	5.8
617 Wholesalers of Apparel and Dry Goods	0	174	174	6.0	0	187	187	8.2
618 Wholesalers of Household Furniture and Furnishings	0	81	81	3.4	0	84	84	3.0
619 Wholesalers of Motor Vehicles and Accessories	0	1,545	1,545	43.9	3	1,516	1,519	39.9
621 Wholesalers of Electrical Machinery and Equipment NES	0	354	354	10.4	0	403	403	7.3
622 Wholesalers of Farm Machinery and Equipment	1	212	213	4.3	0	242	242	5.3
623 Wholesalers of Machinery and Equipment NES	1	1,432	1,433	42.8	1	1,625	1,626	35.7
624 Wholesalers of Hardware Plumbing and Heating	0	613	613	17.7	0	642	642	21.8
625 Wholesalers of Metal and Metal Products NES	0	399	399	10.1	0	377	377	10.5
626 Wholesalers of Lumber and Building Materials	1	1,807	1,808	52.8	3	1,742	1,745	45.5
627 Wholesalers of Scrap and Waste Materials	1	498	499	16.7	3	452	457	17.6
629 Wholesalers NES	0	1,385	1,385	40.2	2	1,341	1,343	39.8
01 Wholesale Trade	*5*	*11,168*	*11,173*	*330.1*	*14*	*11,295*	*11,309*	*313.7*
631 Food Stores	1	5,159	5,160	153.9	0	5,431	5,431	143.7
642 General Merchandise Stores	0	3,893	3,893	88.2	1	4,075	4,076	85.2
652 Tire Battery and Accessories Stores	1	736	737	17.2	0	744	744	16.1
654 Gasoline Service Stations	2	1,288	1,290	38.5	1	1,379	1,380	39.5

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
656 Motor Vehicle Dealers	0	1,310	1,310	29.3	1	1,300	1,301	29.7
658 Motor Vehicle Repair Shops	0	2,059	2,059	61.6	1	2,709	2,710	69.1
663 Shoe Stores	0	162	162	7.3	0	200	200	9.9
665 Men's Clothing Stores	0	203	203	5.7	0	166	166	5.0
667 Women's Clothing Stores	0	138	138	4.5	0	107	107	3.3
669 Clothing and Dry Goods Stores NES	0	143	143	8.3	0	132	132	6.9
673 Hardware Stores	0	217	217	5.8	0	260	260	5.0
676 Household Furniture and Appliance Stores	0	893	893	27.4	0	871	871	20.4
678 Radio Television and Electrical Appliance Repair Shops	0	94	94	3.1	0	97	97	4.0
681 Drug Stores	0	412	412	9.2	0	369	369	10.4
691 Book and Stationery Stores	0	59	59	1.4	0	69	69	2.0
692 Florists Shops	0	106	106	3.8	0	119	119	2.6
694 Jewellery Stores	0	28	28	0.6	0	24	24	0.5
695 Watch and Jewellery Repair Shops	0	7	7	0.4	0	4	4	0.2
696 Liquor Wine and Beer Stores	0	343	343	7.4	0	354	354	10.1
697 Tobacconists	0	35	35	1.8	0	34	34	0.6
699 Retail Stores NES	0	1,107	1,107	35.9	1	1,263	1,264	39.3
02 Retail Trade	*4*	*18,392*	*18,396*	*511.4*	*5*	*19,707*	*19,712*	*503.6*
08 Trade	**9**	**29,560**	**29,569**	**841.5**	**19**	**31,002**	**31,021**	**817.3**
701 Banks and Other Deposit Accepting Establishments	0	125	125	4.6	0	99	99	4.8
703 Other Credit Agencies	0	0	0	0.0	0	4	4	0.0
705 Security Brokers and Dealers Including Exchange	0	1	1	0.0	0	2	2	0.7
707 Investment and Holdings Companies	0	326	326	7.7	1	341	342	8.5
01 Finance Industries	*0*	*452*	*452*	*12.3*	*1*	*446*	*447*	*14.0*
721 Insurance Carriers	0	40	40	1.7	0	35	35	0.5
02 Insurance Carriers	*0*	*40*	*40*	*1.7*	*0*	35	35	0.5
735 Insurance and Real Estate Agencies	0	44	44	1.7	0	40	40	2.3
737 Real Estate Operators	4	979	983	41.9	0	943	943	33.7
03 Insurance Agencies and Real Estate Industries	*4*	*1,027*	*1,027*	*43.6*	*0*	*983*	*983*	*36.0*
09 Finance, Insurance and Real Estate	**4**	**1,515**	**1,519**	**57.6**	**1**	**1,464**	**1,465**	**50.5**

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
801 Kindergartens and Nursery Schools	0	114	114	3.3	0	138	138	3.5
802 Elementary and Secondary Schools	0	1,935	1,935	45.2	0	2,208	2,208	45.2
803 Schools of Art and of the Performing Arts	0	2	2	0.0	0	1	1	0.0
804 Vocational Centres Trade Schools and Business	0	102	102	1.8	0	111	111	2.4
805 Post Secondary, Non University Educational Institutions	1	456	456	6.8	0	409	409	9.3
806 Universities and Colleges	1	640	641	14.7	0	639	639	16.4
807 Libraries Museums and Other Repositories	0	92	92	1.8	0	82	82	2.4
809 Education and Related Services NES	0	50	50	1.1	0	30	30	0.6
01 Education and Related Services	*2*	*3,390*	*3,392*	*74.8*	*0*	*3,618*	*3,618*	*79.8*
821 Hospitals	0	5,492	5,492	163.0	0	5,470	5,470	152.4
822 Related Health Care Institutions	0	1,187	1,187	41.0	0	1,182	1,182	36.3
823 Offices of Physicians and Surgeons	0	54	54	1.7	0	113	113	2.9
824 Offices of Paramedical Personnel Practitioners	0	53	53	3.1	0	53	53	2.6
825 Offices of Dentists	0	4	4	0.7	0	2	2	0.0
826 Diagnostic and Therapeutic Services NES	0	177	177	6.1	1	193	194	3.3
827 Miscellaneous Health Services	0	144	144	3.0	0	230	230	7.9
828 Welfare Organizations	1	2,756	2,757	76.8	0	2,949	2,949	79.4
02 Health and Welfare Services	*1*	*9,867*	*9,868*	*295.5*	*1*	*10,192*	*10,193*	*284.9*
831 Religious Organizations	0	66	66	3.2	1	104	105	3.7
03 Religious Organizations	*0*	*66*	*66*	*3.2*	*1*	*104*	*105*	*3.7*
841 Motion Picture Theatres	0	24	24	0.8	0	28	28	0.8
842 Motion Picture Production and Distribution	0	47	47	1.6	0	53	53	1.7
843 Bowling Alleys and Billiard Parlours	0	28	28	1.5	0	27	27	0.9
844 Golf Clubs and Country Clubs	0	133	133	3.9	1	187	188	5.6
845 Theatrical and Other Staged Entertainment Services	0	20	20	0.6	0	19	19	0.4
849 Miscellaneous Amusement and Recreation Services	0	456	456	9.8	0	463	463	11.8
04 Amusement and Recreation Services	*0*	*708*	*708*	*18.2*	*1*	*777*	*778*	*21.2*
851 Employment Agencies and Personnel Suppliers	0	1,137	1,137	30.9	2	1,271	1,273	42.3
853 Computer Services	0	72	72	1.5	0	75	75	1.5
855 Security and Investigation Services	0	1,218	1,218	30.5	0	1,309	1,309	25.8
861 Offices of Accountants	0	45	45	4.8	0	71	71	4.5

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
862 Advertising Services	0	112	112	2.7	0	100	100	2.7
863 Offices of Architects	0	10	10	0.2	0	11	11	0.6
864 Engineering and Scientific Services	0	447	447	11.1	0	516	516	12.4
866 Offices of Lawyers and Notaries	0	5	5	0.1	0	8	8	0.1
867 Offices of Management and Business Consultants	0	209	209	5.7	0	208	208	6.2
869 Miscellaneous Services to Business Management	1	901	902	30.4	1	896	897	30.0
05 Services to Business Management	*1*	*4,156*	*4,157*	*118.0*	*3*	*4,465*	*4,468*	*126.0*
871 Shoe Repair Shops	0	31	31	1.2	0	51	51	1.3
872 Barber and Beauty Shops	0	17	17	2.1	0	12	12	1.4
873 Private Households	0	105	105	3.5	0	69	69	4.3
874 Laundries, Cleaners and Pressers Except Self Serve	0	497	497	25.6	0	478	478	23.1
876 Self Service Laundries and Dry Cleaners	0	21	21	0.2	0	29	29	0.5
877 Funeral Services	0	81	81	1.6	0	72	72	1.7
879 Miscellaneous Personal Services	0	93	93	5.0	0	73	73	4.1
06 Personal Services	*0*	*845*	*845*	*39.3*	*0*	*784*	*784*	*36.3*
881 Hotels and Motels	0	1,927	1,927	63.4	0	1,984	1,984	58.6
883 Lodging Houses and Residential Clubs	0	9	9	0.2	0	14	14	0.3
884 Camping Grounds and Trailer Parks	0	58	58	1.5	0	40	40	1.5
886 Restaurants Caterers and Taverns	3	7,675	7,678	189.3	0	7,626	7,626	179.7
07 Accommodation and Food Services	*3*	*9,669*	*9,672*	*254.4*	*0*	*9,664*	*9,664*	*240.2*
891 Labour Orgnizations and Trade Associations	0	187	187	3.5	0	207	207	5.7
893 Photographic Services NES	0	63	63	1.9	0	67	67	2.8
894 Automobile and Truck Rental	1	185	186	3.7	0	164	164	4.3
895 Machinery and Equipment Rental	0	338	338	14.3	1	302	303	11.7
896 Blacksmithing and Welding Shops	0	306	306	11.5	0	384	384	9.5
897 Miscellaneous Repair Shops	0	210	210	6.5	0	206	206	4.3
898 Services to Buildings and Dwellings	0	1,350	1,350	73.2	2	1,191	1,193	65.5
899 Miscellaneous Services NES	1	468	469	12.5	1	471	472	13.7
08 Miscellaneous Services	*2*	*3,107*	*3,109*	*127.1*	*4*	*2,992*	*2,996*	*117.5*
10 Community, Business and Personal Service Industries	**9**	**31,808**	**31,817**	**930.5**	**10**	**32,596**	**32,606**	**909.4**

(continued)

APPENDIX E *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
902 Defence Services	0	25	25	1.5	0	12	12	0.1
909 Other Federal Administration	0	40	40	0.9	0	29	29	1.4
01 Federal Administration	*0*	*65*	*65*	*2.5*	*0*	*41*	*41*	*1.5*
931 Provincial Administration	0	28	28	0.4	0	33	33	0.7
02 Provincial Administration	*0*	*28*	*28*	*0.4*	*0*	*33*	*33*	*0.7*
951 Local Administration	4	2,462	2,466	71.3	4	2,336	2,340	70.5
03 Local Administrtion	*4*	*2,462*	*2,466*	*71.3*	*4*	*2,336*	*2,340*	*70.5*
11 Public Administration	**4**	**2,555**	**2,559**	**74.2**	**4**	**2,410**	**2,414**	**72.6**
Total for Schedule 1	**183**	**179,402**	**179,585**	**6,194.4**	**292**	**183,940**	**184,232**	**6,065.8**

1. Days lost due to temporary total disability up to initial settlement for claims initially settled in year indicated. Totals may not add due to rounding.
2. Industry Classification: Standard Industrial Classification 1970.

Source: Workers' Compensation Board of Ontario.

APPENDIX F

Count of Fatal and Non-Fatal and Days of Temporary Total Disability[1] by SIC[2] for Disabling Injury Claims Initially Settled in 1987 and 1988 — WCB Schedule 2 Employers

INDUSTRY	1987 Number of Claims Fatal	1987 Non-Fatal	1987 Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Non-Fatal	1988 Total	1988 Days of Temporary Total Disability (000)
295 Smelting and Refining	1	33	34	0.6	0	23	23	1.0
12 Primary Metal Industries	*1*	*33*	*34*	*0.6*	0	23	23	1.0
304 Metal Stamping Pressing and Coating Industry	0	26	26	0.4	0	28	28	1.0
13 Metal Fabricating Ind. (Except machinery and Transportation)	*0*	*26*	*26*	*0.4*	*0*	*28*	*28*	*1.0*
05 Manufacturing Industries	**1**	**59**	**60**	**1.0**	**0**	**51**	**51**	**2.0**
421 Special Trade Contractors	0	1	1	0.5	0	1	1	0.9
02 Special Trade Contractors	*0*	*1*	*1*	*0.5*	*0*	*1*	*1*	*0.9*
06 Construction Industry	**0**	**1**	**1**	**0.5**	**0**	**1**	**1**	**0.9**
501 Air Transport	0	834	834	18.9	1	1,137	1,138	30.8
503 Railway Transport	6	1,359	1,365	74.7	1	938	939	62.8
504 Water Transport	0	103	103	13.9	0	77	77	9.2
505 Services Incidental to Water Transport	1	95	96	7.7	0	114	114	8.8
507 Other Truck Transport	0	2	2	2.4	0	0	0	0.0
509 Urban Transit Systems	0	850	850	25.9	0	860	860	24.7
516 Highway and Bridge Maintenance	0	0	0	0.0	0	4	4	0.0
517 Miscellaneous Services Incidental to Transportation	0	11	11	0.5	0	9	9	0.0
519 Other Transportation	0	116	116	2.4	0	130	130	2.1
01 Transportation	*7*	*3,370*	*3,377*	*146.4*	*2*	*3,269*	*3,271*	*138.5*
543 Radio and Television Broadcasting	0	40	40	0.7	0	45	45	2.1
544 Telephone Systems	0	269	269	5.8	0	63	63	2.8
545 Telegraph and Cable Systems	0	39	39	0.7	0	24	24	0.9
548 Post Office	0	3,270	3,270	69.6	0	3,025	3,025	67.7
03 Communications	*0*	*3,618*	*3,618*	*76.9*	*0*	*3,157*	*3,157*	*73.5*

(continued)

APPENDIX F *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
572 Electric Power	0	1,104	1,104	48.3	0	987	987	46.0
576 Water Systems	0	10	10	0.0	0	12	12	0.1
04 Electric Power, Gas and Water Utilities	*0*	*1,114*	*1,114*	*48.3*	*0*	*999*	*999*	*46.1*
07 Transportation, Communication and Other Utilities	**7**	**8,102**	**8,109**	**271.6**	**2**	**7,425**	**7,427**	**258.2**
608 Wholesalers of Petroleum Products	0	0	0	0.0	0	1	1	0.0
01 Wholesale Trade	*0*	*0*	*0*	*0.0*	*0*	*1*	*1*	*0.0*
696 Liquor, Wine and Beer Stores	0	393	393	11.1	0	427	427	13.4
699 Retail Stores NES	0	1	1	0.0	0	193	193	2.3
02 Retail Trade	*0*	*394*	*394*	*11.1*	*0*	*620*	*620*	*15.7*
08 Trade	**0**	**394**	**394**	**11.1**	**0**	**621**	**621**	**15.7**
703 Other Credit Agencies	0	14	14	0.2	0	17	17	0.1
01 Finance Industries	*0*	*14*	*14*	*0.2*	*0*	*17*	*17*	*0.1*
721 Insurance Carriers	0	20	20	0.8	0	22	22	0.2
02 Insurance Carriers	*0*	*20*	*20*	*0.8*	*0*	*22*	*22*	*0.2*
737 Real Estate Operators	0	64	64	3.2	0	85	85	3.3
03 Insurance Agencies and Real Estate Industries	*0*	*64*	*64*	*3.2*	*0*	*85*	*85*	*3.3*
09 Finance, Insurance and Real Estate	**0**	**98**	**98**	**4.1**	**0**	**124**	**124**	**3.7**
802 Elementary and Secondary Schools	1	1,563	1,563	37.5	1	1,628	1,629	37.4
807 Libraries, Museums and Other Repositories	0	2	2	0.4	0	1	1	0.0
01 Education and Related Services	*1*	*1,565*	*1,566*	*37.9*	*1*	*1,629*	*1,630*	*37.4*
821 Hospitals	0	968	968	21.0	0	955	955	21.1
828 Welfare Organizations	0	77	77	1.3	0	74	74	1.5
02 Health and Welfare Services	*0*	*1,045*	*1,045*	*22.3*	*0*	*1,029*	*1,029*	*22.6*
849 Miscellaneous Amusement and Recreation Services	0	86	86	1.7	0	93	93	2.1
04 Amusement and Recreation Services	*0*	*86*	*86*	*1.7*	*0*	*93*	*93*	*2.1*
866 Offices of Lawyers and Notaries	0	4	4	0.0	0	0	0	0.0
867 Offices of Management and Business Consultants	0	6	6	0.0	0	5	5	0.1

(continued)

APPENDIX F *(continued)*

INDUSTRY	1987 Number of Claims Fatal	1987 Number of Claims Non-Fatal	1987 Number of Claims Total	1987 Days of Temporary Total Disability (000)	1988 Number of Claims Fatal	1988 Number of Claims Non-Fatal	1988 Number of Claims Total	1988 Days of Temporary Total Disability (000)
869 Miscellaneous Services to Business Management	0	2	2	0.0	0	0	0	0.0
05 Services to Business Management	*0*	*12*	*12*	*0.1*	*0*	*5*	*5*	*0.1*
899 Miscellaneous Services NES	0	2	2	0.3	0	1	1	0.1
08 Miscellaneous Services	*0*	*2*	*2*	*0.3*	*0*	*1*	*1*	*0.1*
10 Community, Business and Personal Service Industries	**1**	**2,710**	**2,711**	**62.3**	**1**	**2,757**	**2,758**	**62.4**
902 Defence Services	0	661	661	16.4	0	630	630	17.6
909 Other Federal Administration	2	1,493	1,495	31.2	1	1,481	1,482	30.6
01 Federal Administration	*2*	*2,154*	*2,156*	*47.6*	*1*	*2,111*	*2,112*	*48.2*
931 Provincial Administration	1	3,248	3,249	76.6	0	3,153	3,153	65.6
02 Provincial Adminsitration	*1*	*3,248*	*3,249*	*76.6*	*0*	*3,153*	*3,153*	*65.6*
951 Local Administration	0	6,625	6,625	186.2	2	6,610	6,612	179.4
03 Local Administration	*0*	*6,625*	*6,625*	*186.2*	*2*	*6,610*	*6,612*	*179.4*
991 Other Government Offices	0	8	8	0.5	0	14	14	0.4
04 Other Government Offices	*0*	*8*	*8*	*0.5*	*0*	*14*	*14*	*0.4*
11 Public Administration and Defense	**3**	**12,035**	**12,038**	**310.9**	**3**	**11,888**	**11,891**	**293.6**
Total for Schedule 2	**12**	**23,399**	**23,411**	**661.7**	**6**	**22,867**	**22,873**	**636.4**

1. Days lost due to temporary total disability up to initial settlement for claims initially settled in year indicated.
2. Industry Classification: Standard Industrial Classification 1970.

Source: Workers' Compensation Board of Ontario.